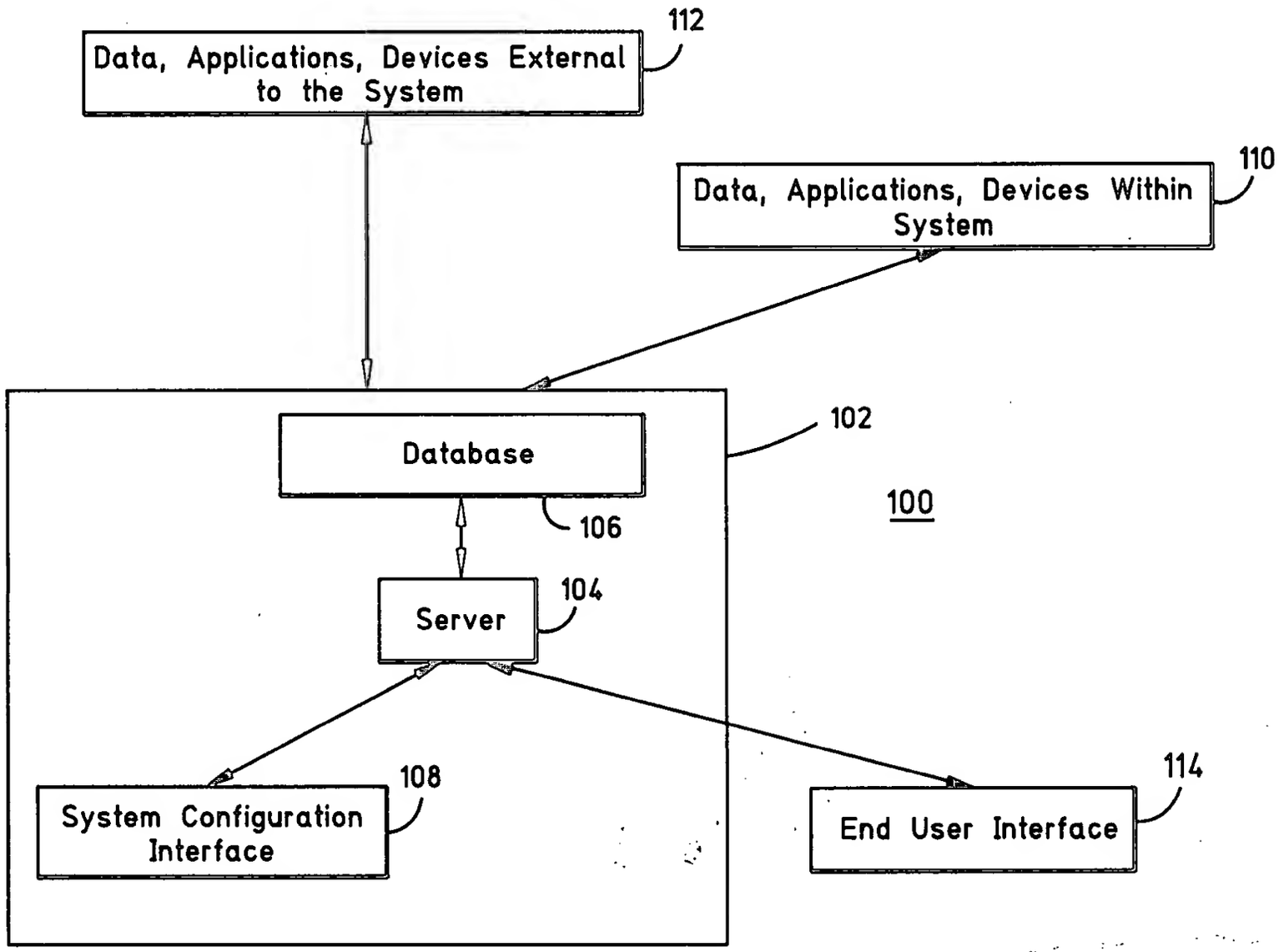

Data, Applications, Devices External to the System
112
Data, Applications, Devices Within System
110
Database
102
100
106
Server
104
System Configuration Interface
108
End User Interface
114

FIGURE 1

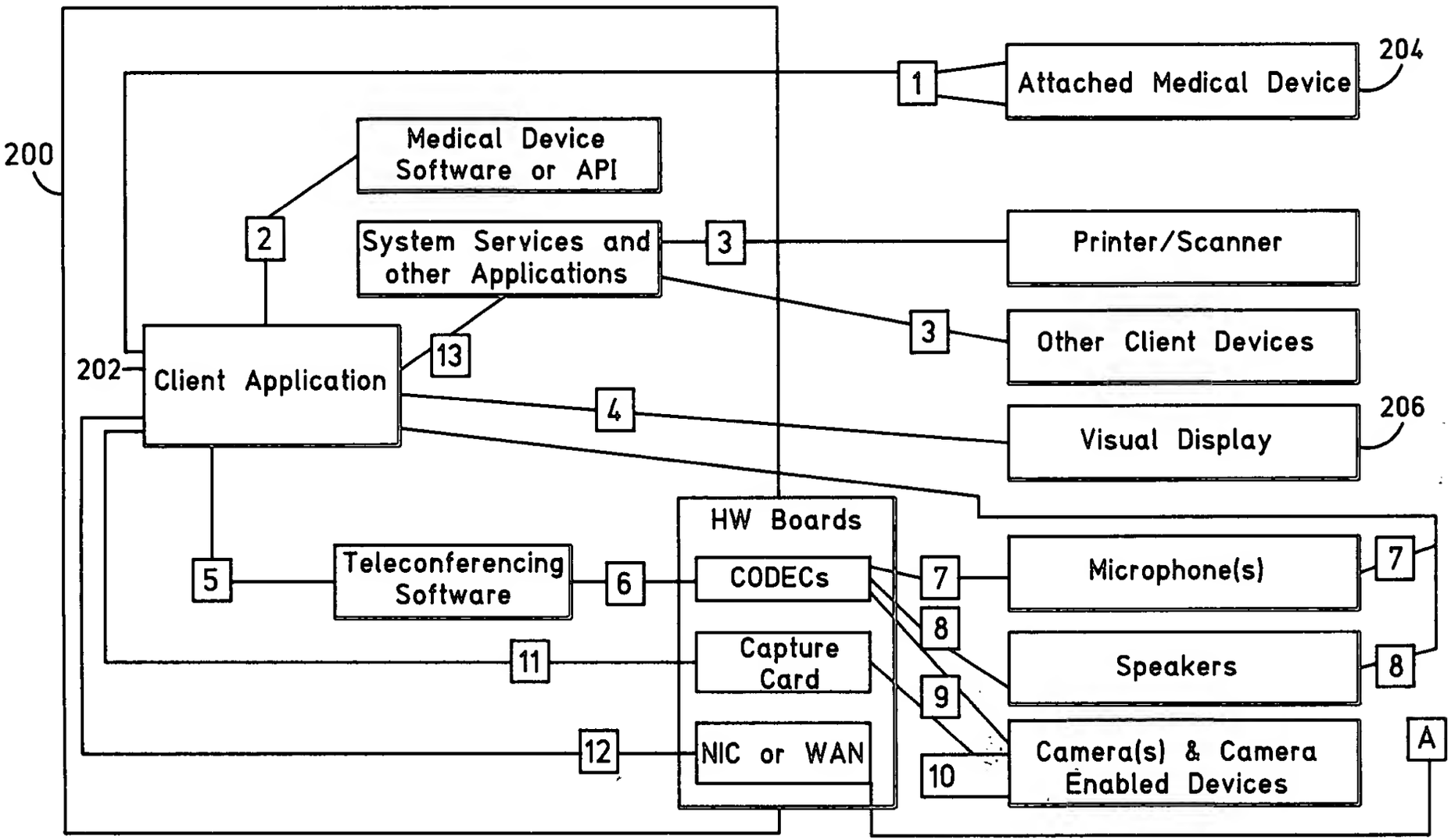
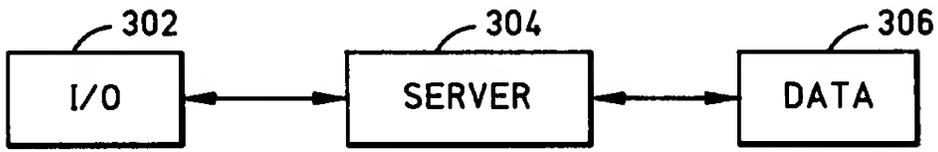

200
Attached Medical Device
204
1
Medical Device Software or API
2
System Services and other Applications
3
Printer/Scanner
3
Other Client Devices
202
Client Application
13
4
Visual Display
206
HW Boards
5
Teleconferencing Software
6
CODECs
7
Microphone(s)
7
8
Capture Card
Speakers
8
11
9
12
NIC or WAN
10
Camera(s) & Camera Enabled Devices
A

FIGURE 2



100

FIGURE 3

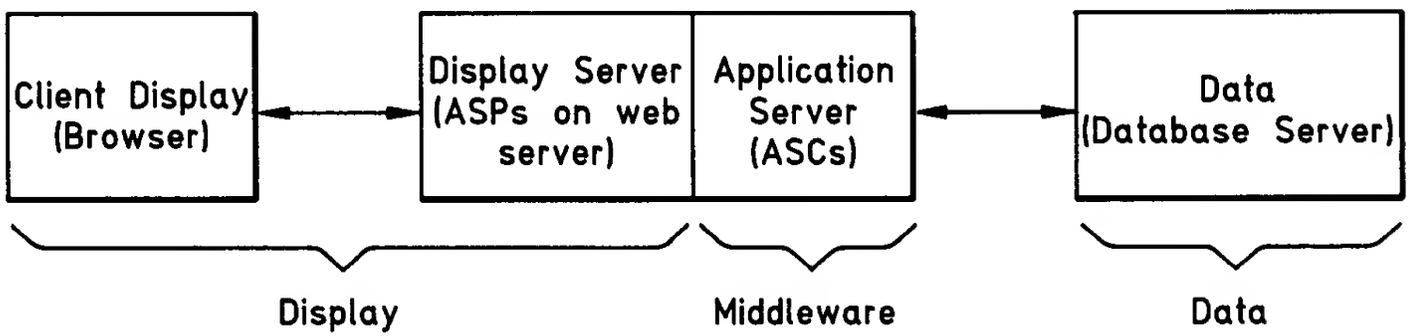


FIGURE 4

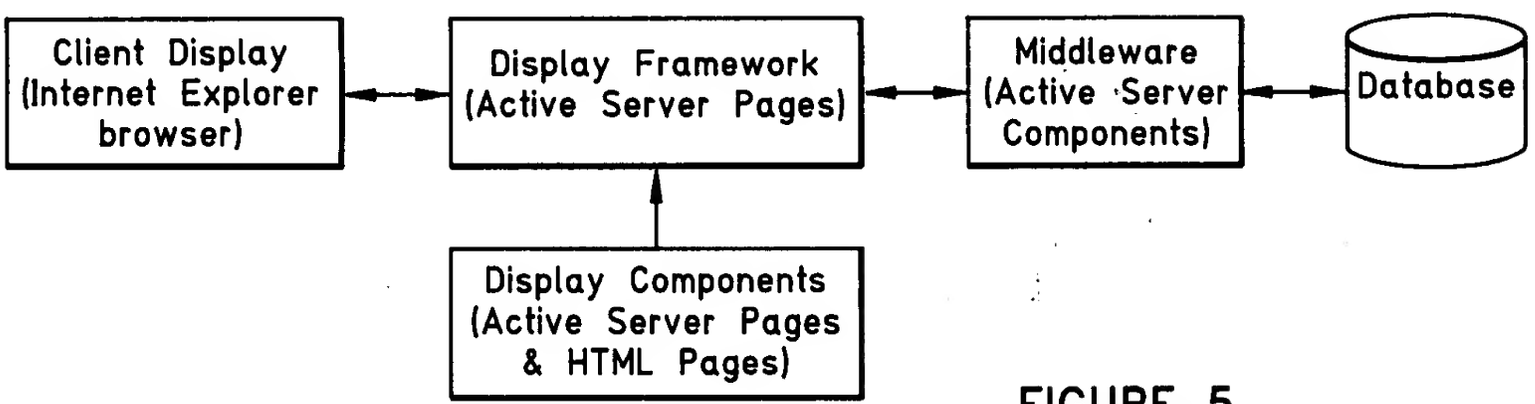


FIGURE 5

FIGURE 6A

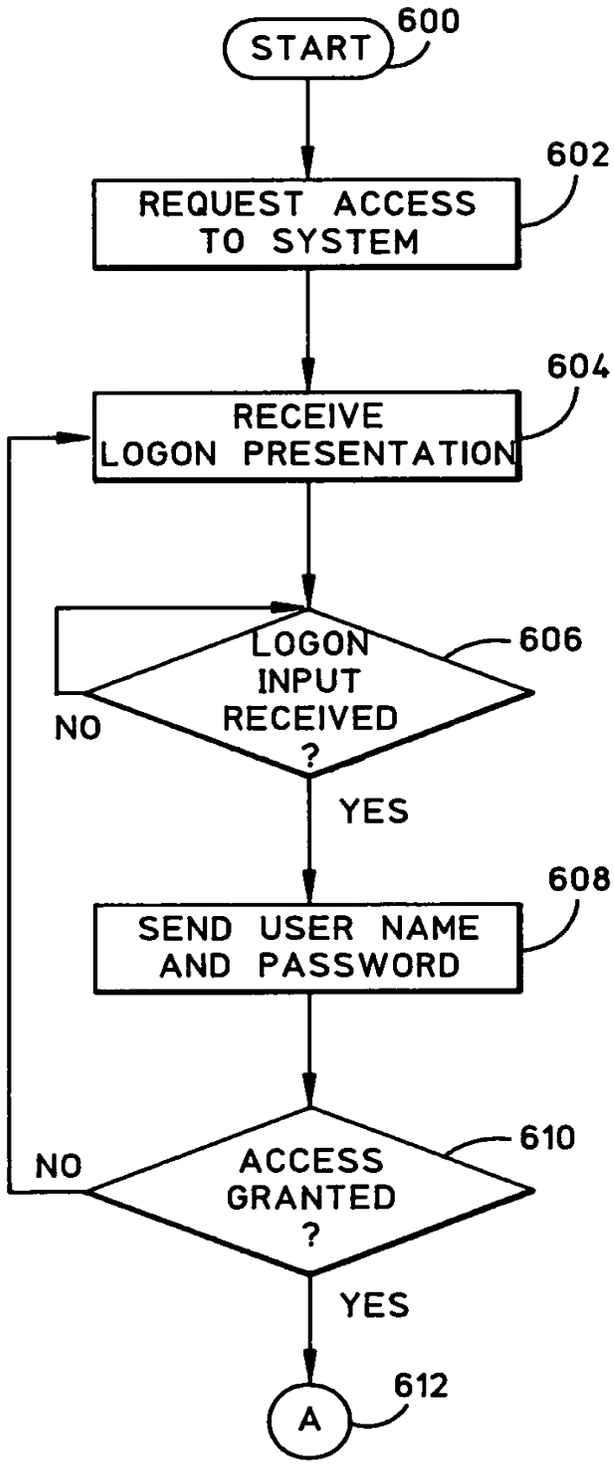


FIGURE 7A

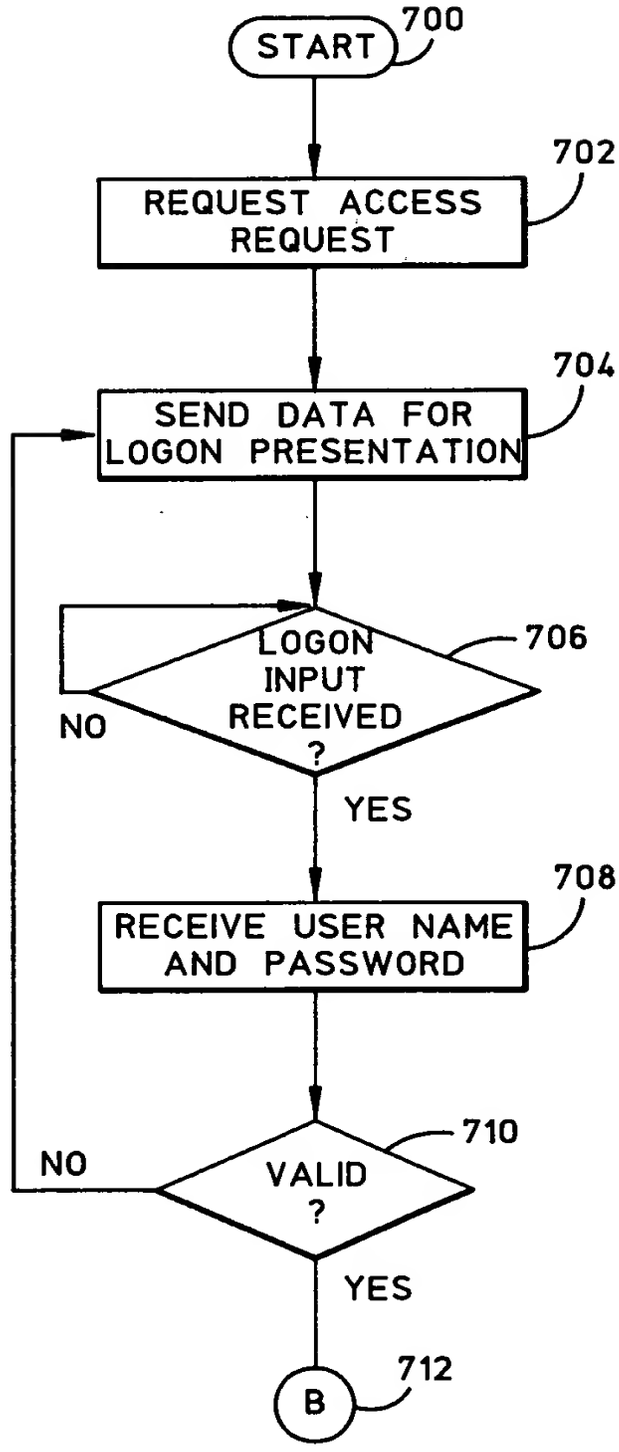


FIGURE 6B

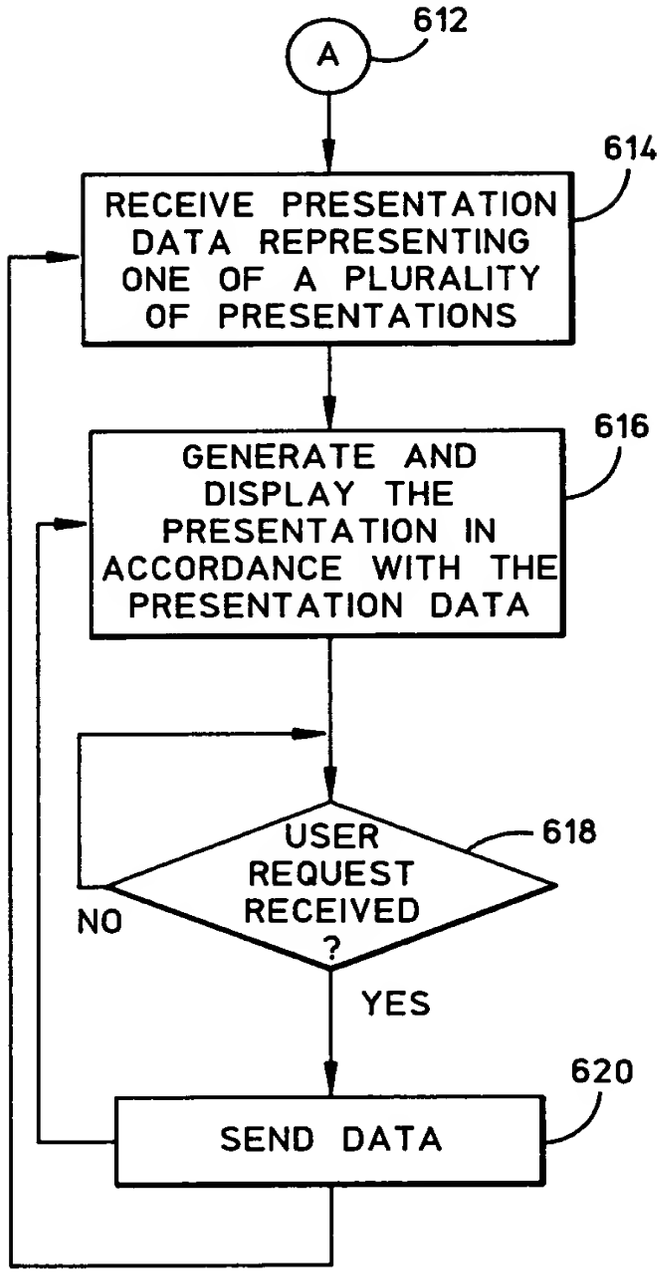


FIGURE 7B

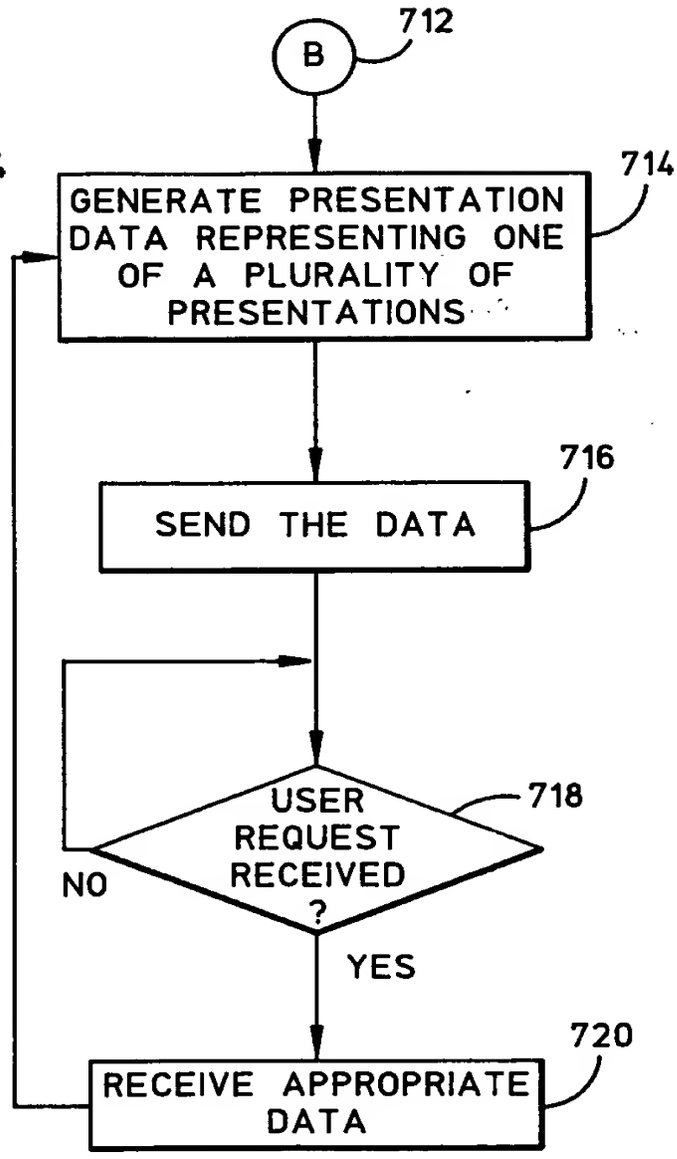
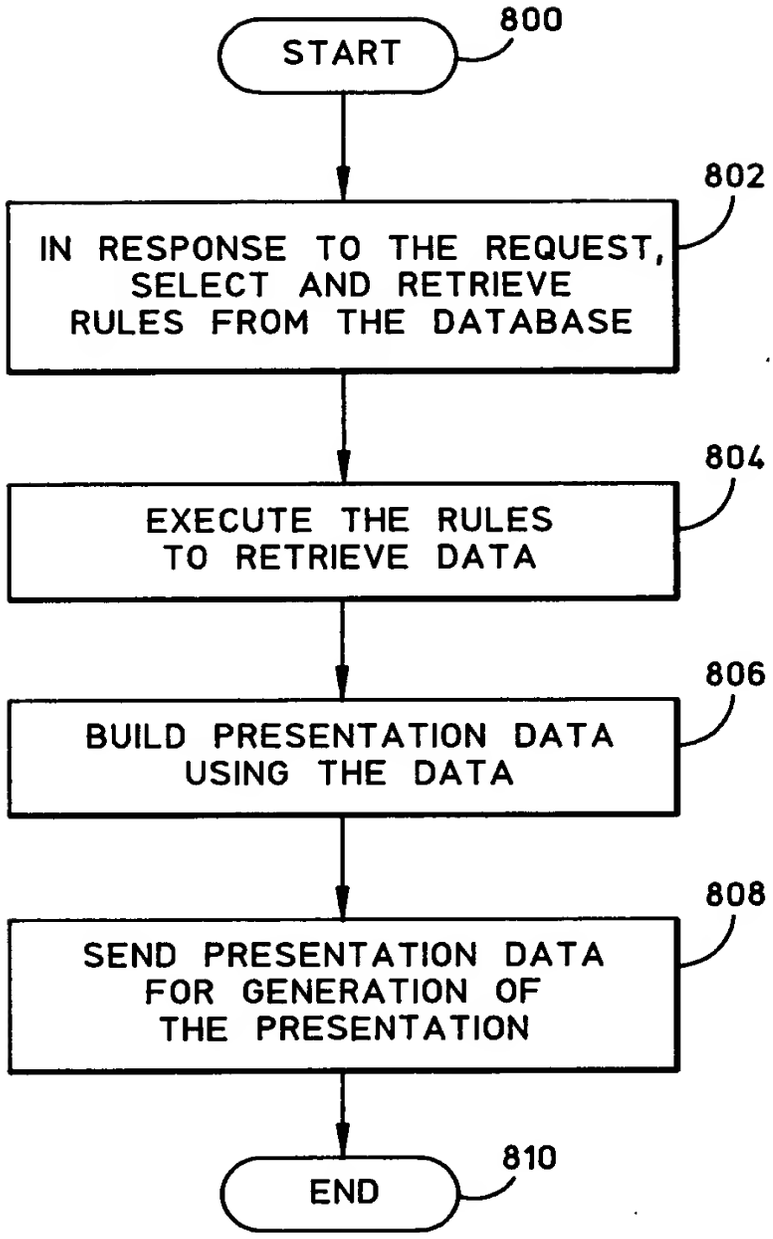


FIGURE 8


START
800
IN RESPONSE TO THE REQUEST, SELECT AND RETRIEVE RULES FROM THE DATABASE
802
EXECUTE THE RULES TO RETRIEVE DATA
804
BUILD PRESENTATION DATA USING THE DATA
806
SEND PRESENTATION DATA FOR GENERATION OF THE PRESENTATION
808
END
810

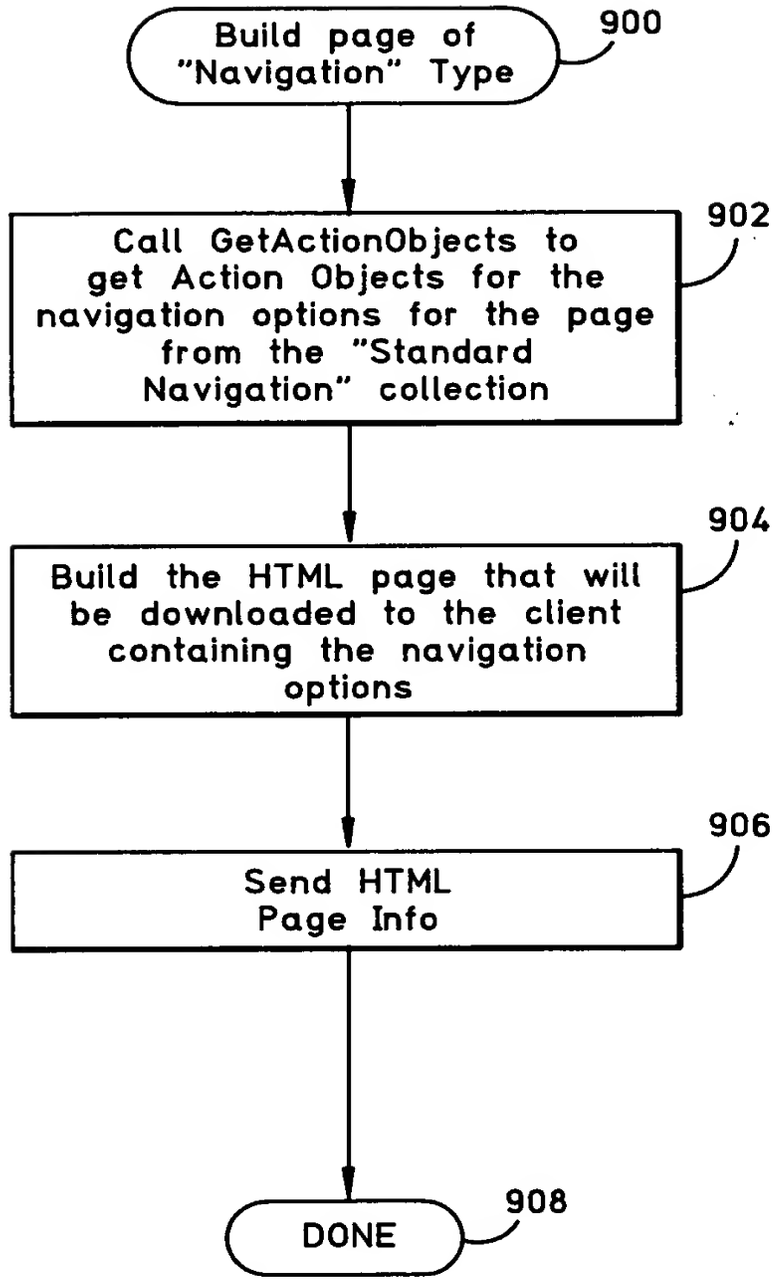
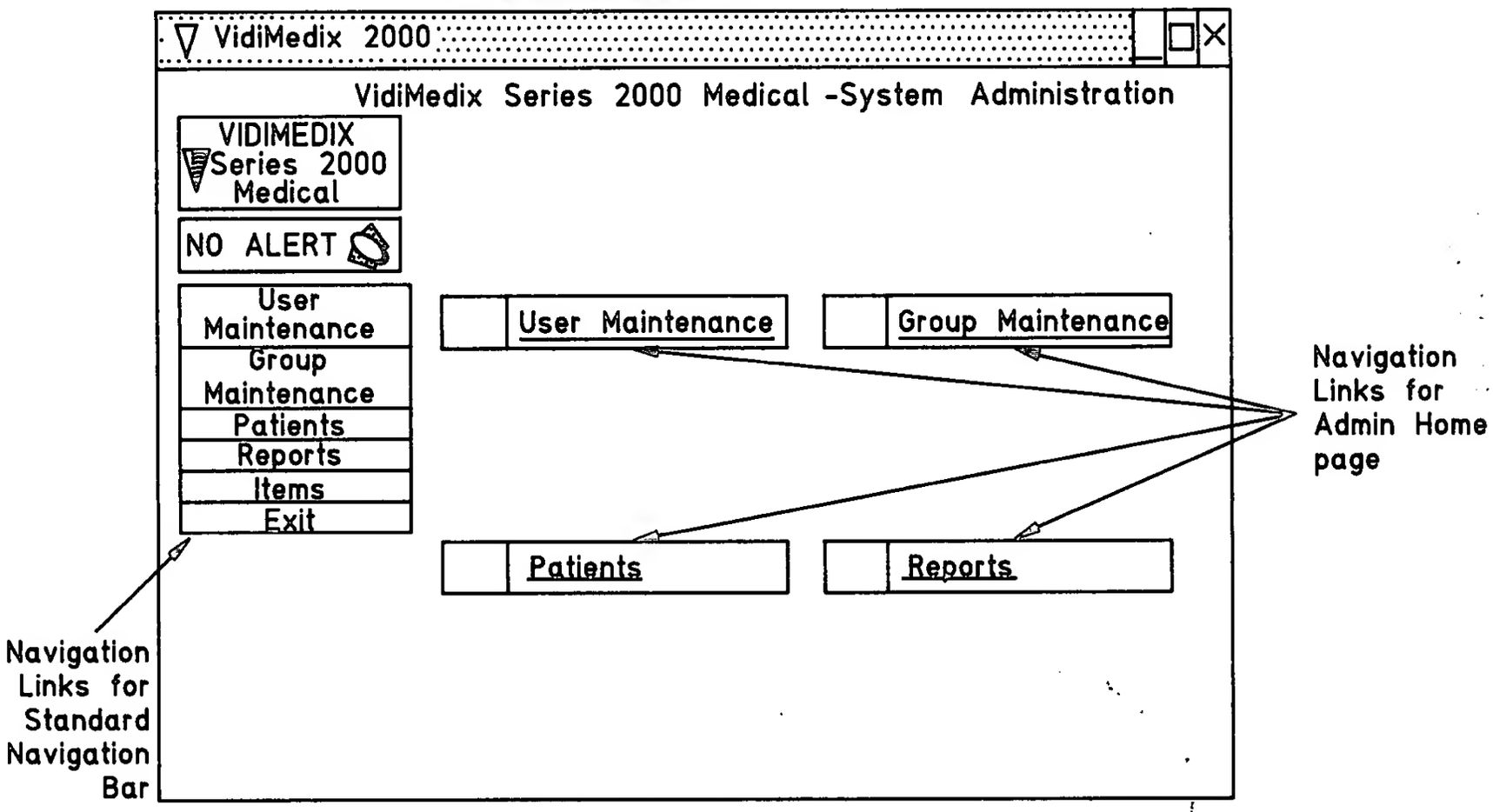

Build page of "Navigation" Type
900
Call GetActionObjects to get Action Objects for the navigation options for the page from the "Standard Navigation" collection
902
Build the HTML page that will be downloaded to the client containing the navigation options
904
Send HTML Page Info
906
DONE
908

FIGURE 9

FIGURE 10

PAGE = "NAVIGATION" TYPE



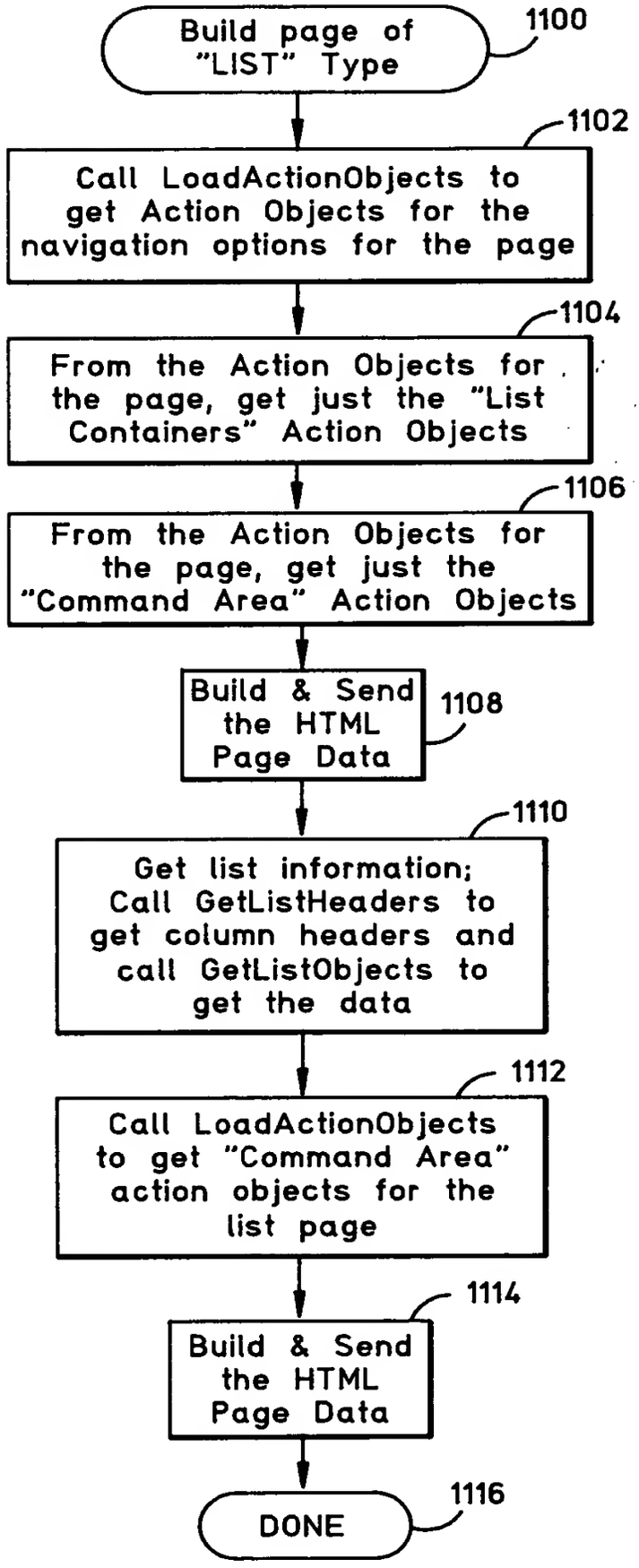
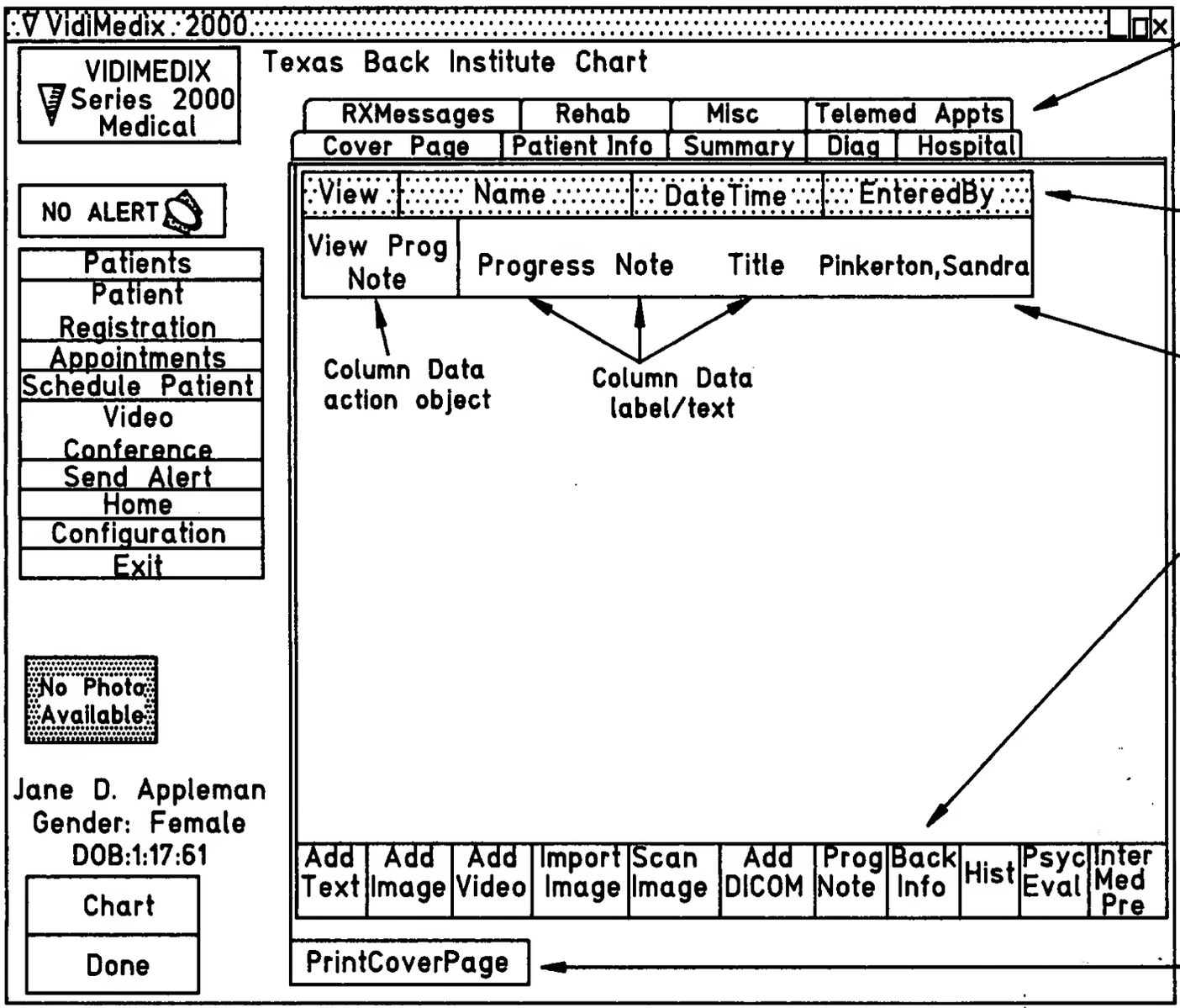

Build page of "LIST" Type
1100
Call LoadActionObjects to get Action Objects for the navigation options for the page
1102
From the Action Objects for the page, get just the "List Containers" Action Objects
1104
From the Action Objects for the page, get just the "Command Area" Action Objects
1106
Build & Send the HTML Page Data
1108
Get list information; Call GetListHeaders to get column headers and call GetListObjects to get the data
1110
Call LoadActionObjects to get "Command Area" action objects for the list page
1112
Build & Send the HTML Page Data
1114
DONE
1116

FIGURE 11

FIGURE 12

PAGE = "LIST" TYPE



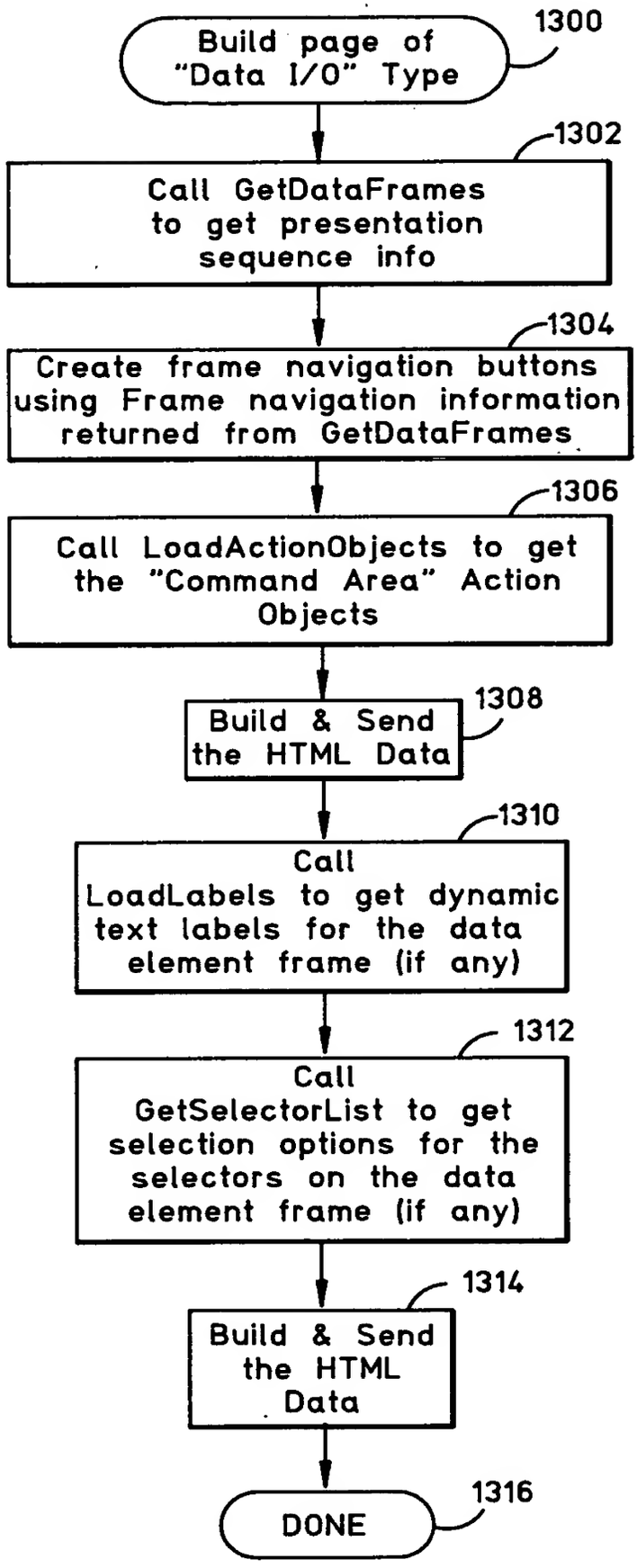
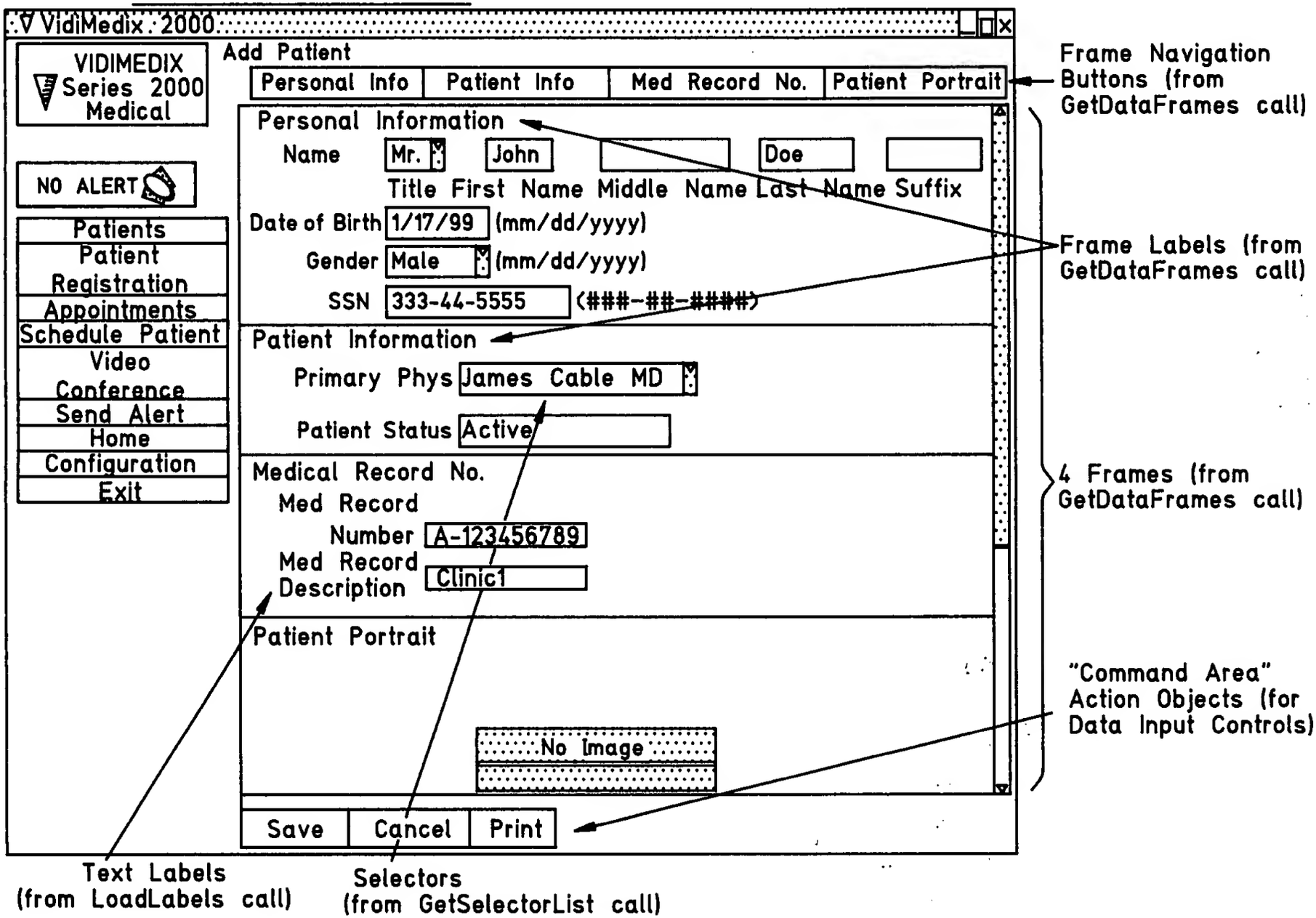

Build page of "Data I/O" Type
1300
Call GetDataFrames to get presentation sequence info
1302
Create frame navigation buttons using Frame navigation information returned from GetDataFrames
1304
Call LoadActionObjects to get the "Command Area" Action Objects
1306
Build & Send the HTML Data
1308
Call LoadLabels to get dynamic text labels for the data element frame (if any)
1310
Call GetSelectorList to get selection options for the selectors on the data element frame (if any)
1312
Build & Send the HTML Data
1314
DONE
1316

FIGURE 13

FIGURE 14

PAGE = "DATA I/O" TYPE



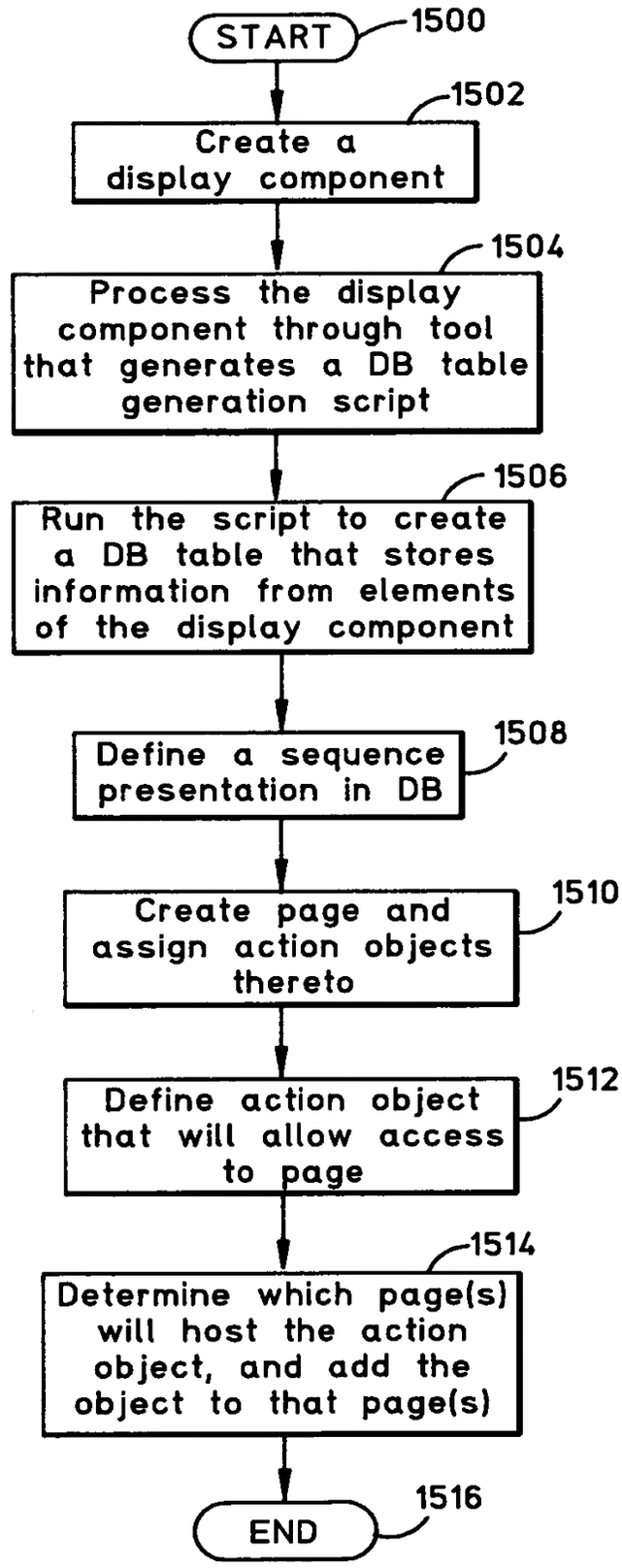

START
1500
Create a display component
1502
Process the display component through tool that generates a DB table generation script
1504
Run the script to create a DB table that stores information from elements of the display component
1506
Define a sequence presentation in DB
1508
Create page and assign action objects thereto
1510
Define action object that will allow access to page
1512
Determine which page(s) will host the action object, and add the object to that page(s)
1514
END
1516

FIGURE 15

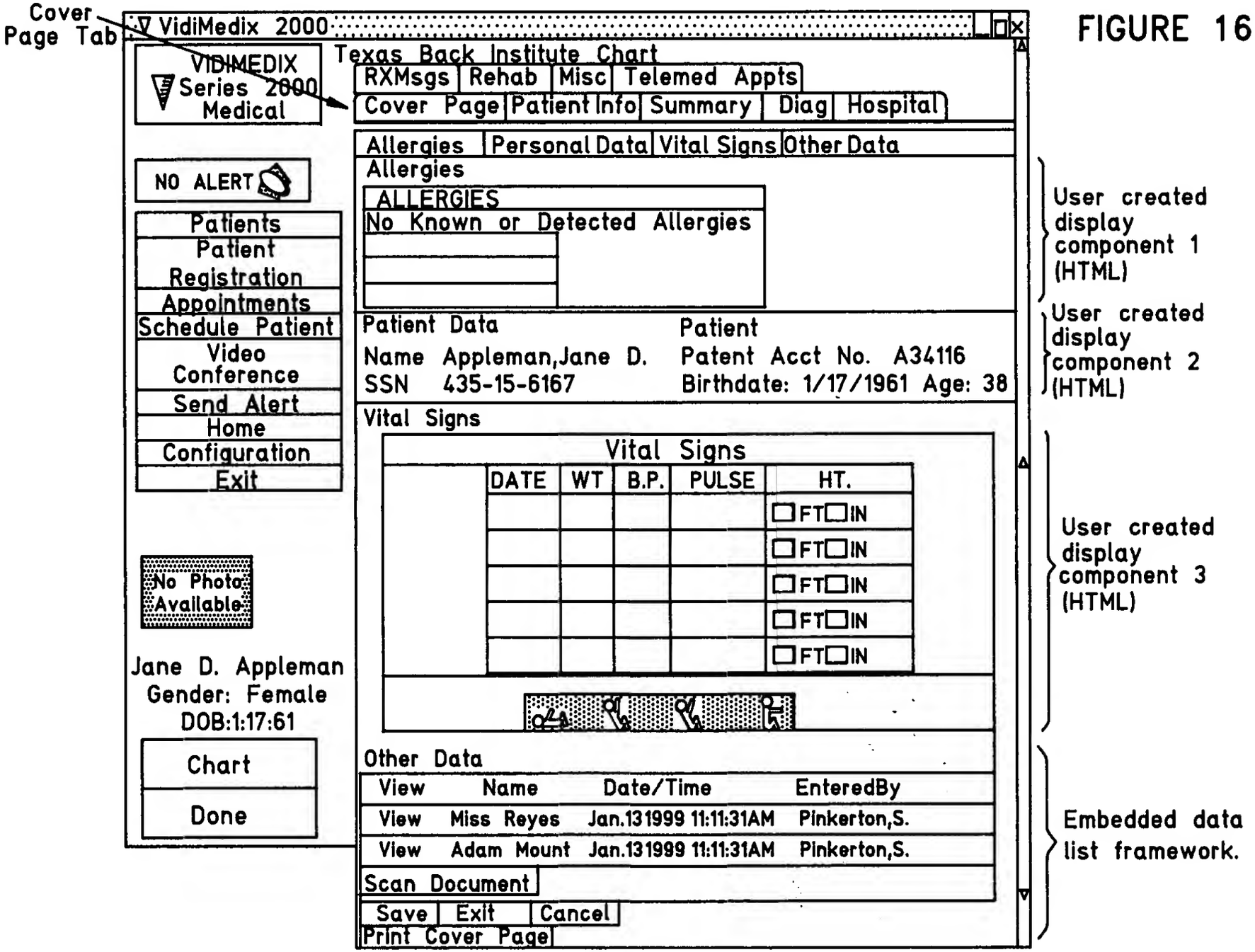

Cover Page Tab
VidiMedix 2000
VIDIMEDIX Series 2000 Medical
Texas Back Institute Chart
RXMsgs
Rehab
Misc
Telemed Appts
Cover Page
Patient Info
Summary
Diag
Hospital
Allergies
Personal Data
Vital Signs
Other Data
NO ALERT
Patients
Patient Registration
Appointments
Schedule Patient
Video Conference
Send Alert
Home
Configuration
Exit
Allergies
ALLERGIES
No Known or Detected Allergies
Patient Data
Patient
Name Appleman,Jane D.
Patent Acct No. A34116
SSN 435-15-6167
Birthdate: 1/17/1961 Age: 38
Vital Signs
Vital Signs
DATE
WT
B.P.
PULSE
HT.
FT IN
No Photo Available
Jane D. Appleman
Gender: Female
DOB:1:17:61
Chart
Done
Other Data
View
Name
Date/Time
EnteredBy
View Miss Reyes Jan.131999 11:11:31AM Pinkerton,S.
View Adam Mount Jan.131999 11:11:31AM Pinkerton,S.
Scan Document
Save
Exit
Cancel
Print Cover Page
User created display component 1 (HTML)
User created display component 2 (HTML)
User created display component 3 (HTML)
Embedded data list framework.

FIGURE 16

FIGURE 17

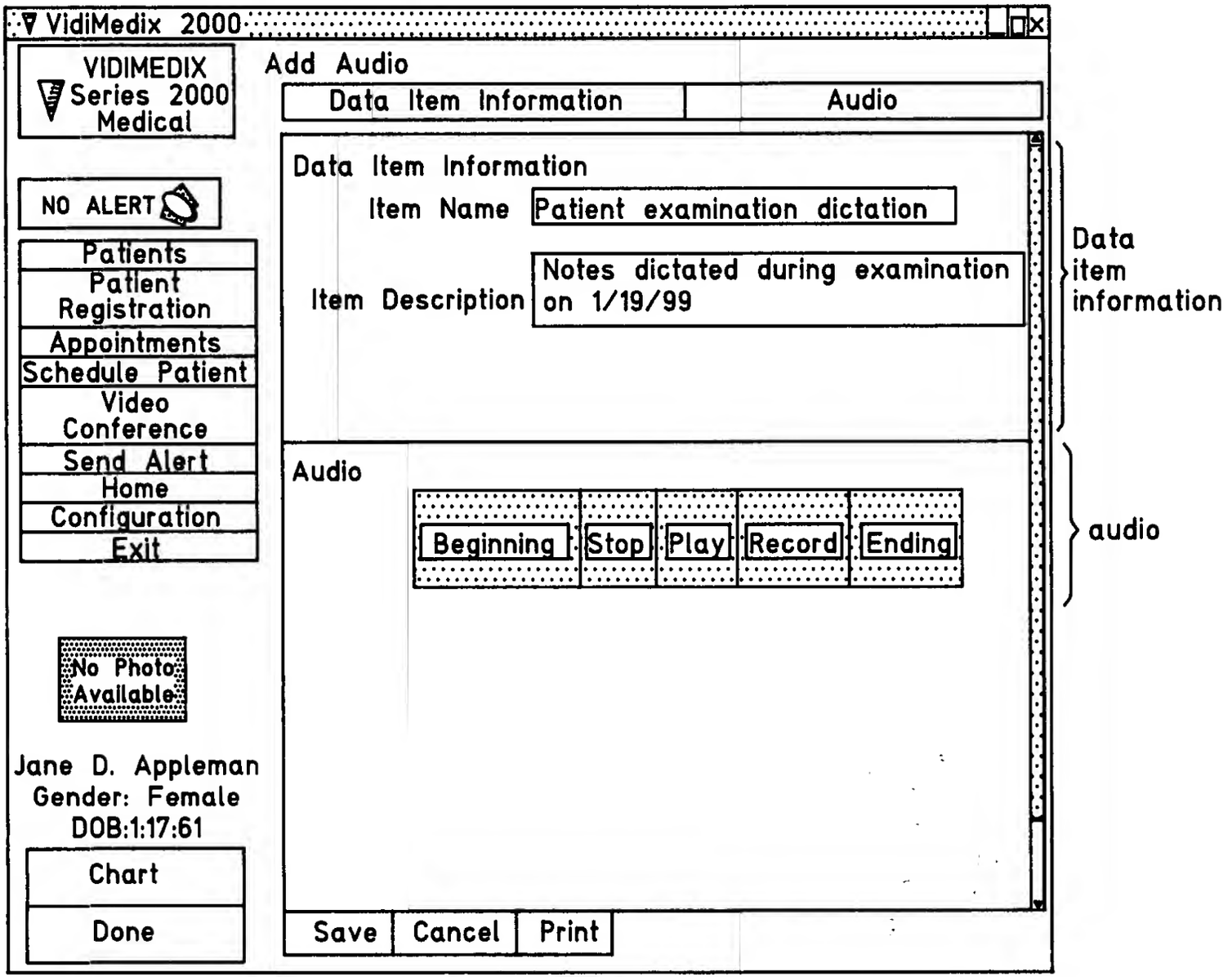

VidiMedix 2000
VIDIMEDIX Series 2000 Medical
NO ALERT
Patients
Patient Registration
Appointments
Schedule Patient
Video Conference
Send Alert
Home
Configuration
Exit
No Photo Available
Jane D. Appleman
Gender: Female
DOB:1:17:61
Chart
Done
Add Audio
Data Item Information
Audio
Data Item Information
Item Name
Patient examination dictation
Item Description
Notes dictated during examination on 1/19/99
Audio
Beginning
Stop
Play
Record
Ending
Save
Cancel
Print
Data item information
audio

FIGURE 18

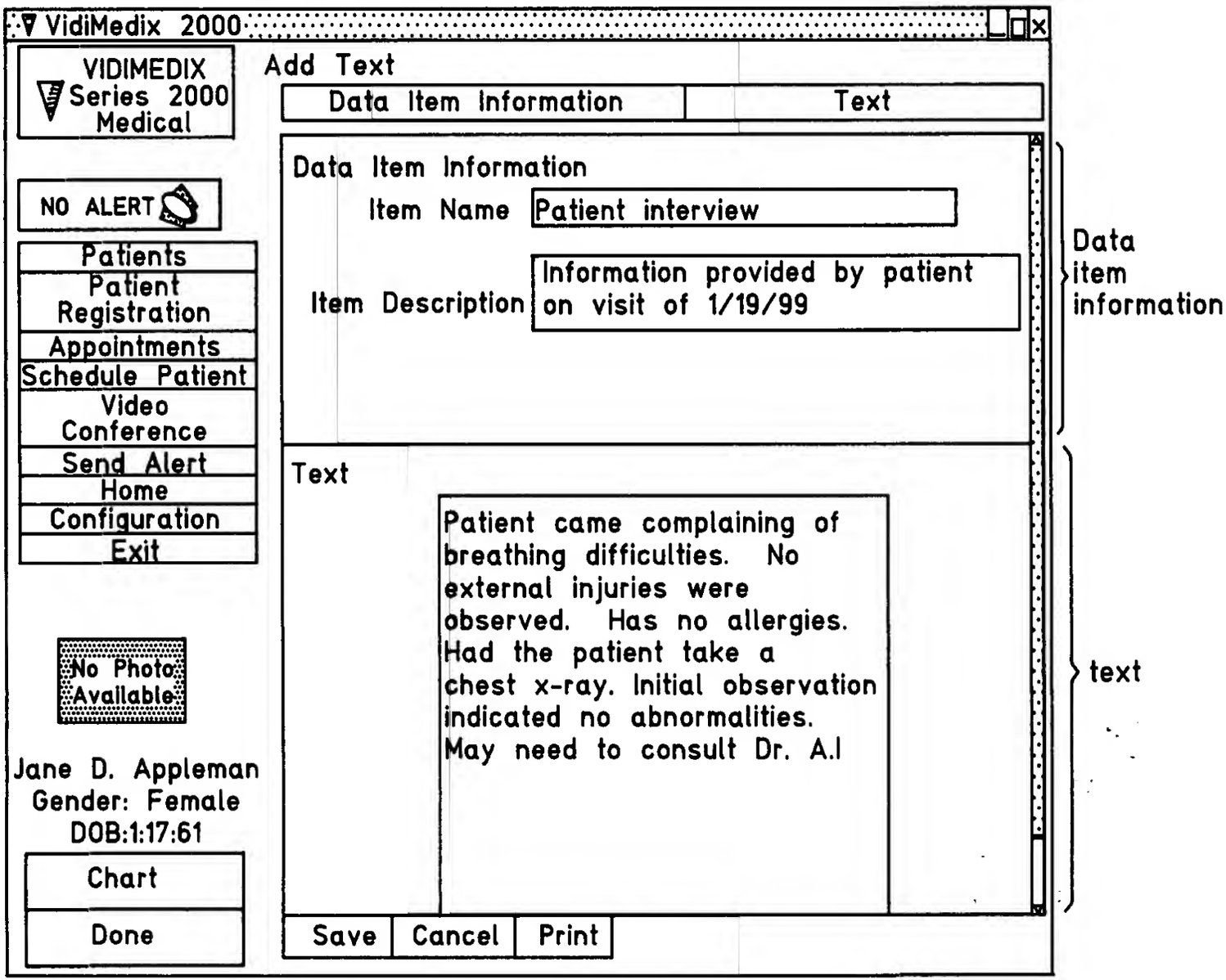
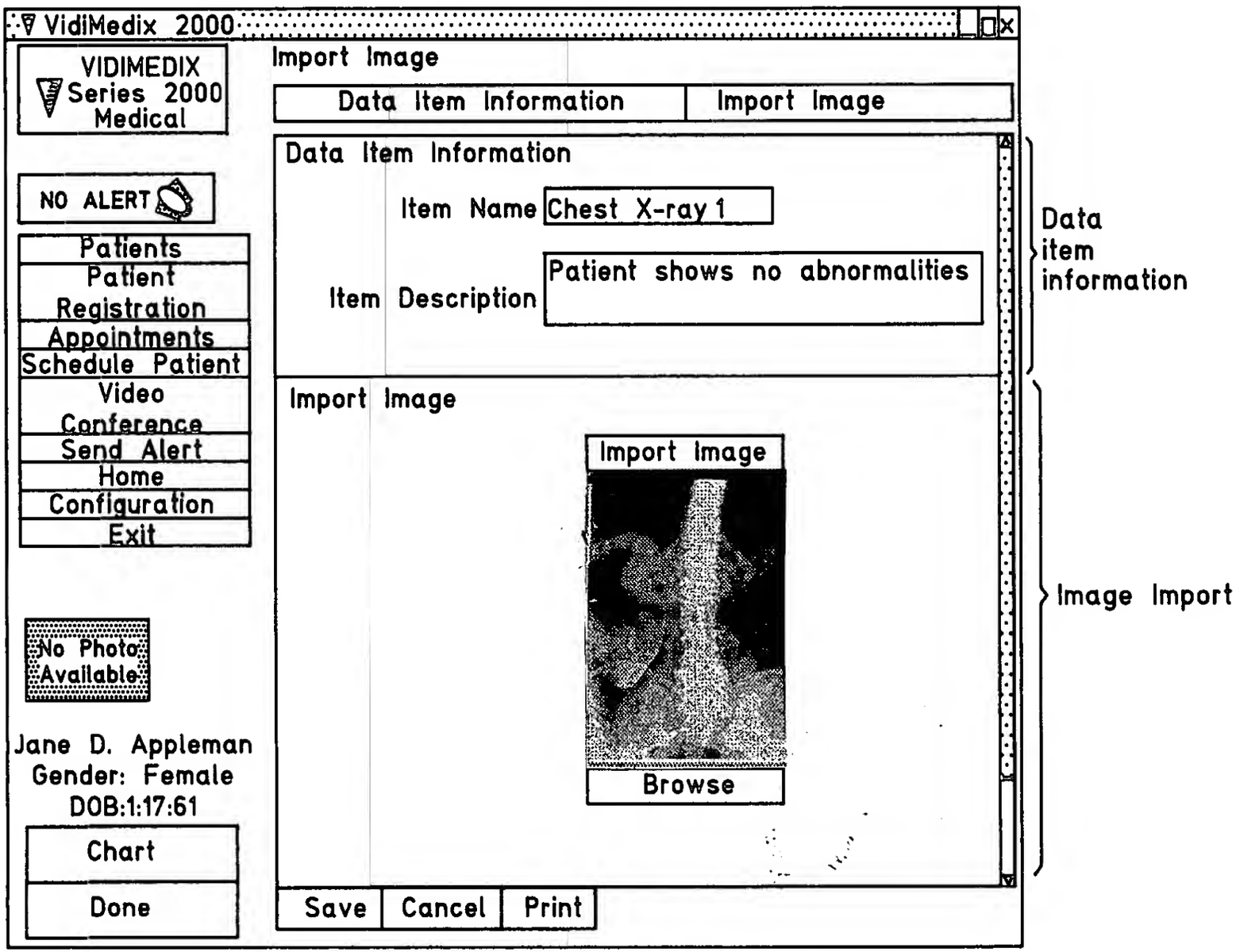

VidiMedix 2000
VIDIMEDIX Series 2000 Medical
NO ALERT
Patients
Patient Registration
Appointments
Schedule Patient
Video Conference
Send Alert
Home
Configuration
Exit
No Photo Available
Jane D. Appleman
Gender: Female
DOB:1:17:61
Chart
Done
Add Text
Data Item Information
Text
Data Item Information
Item Name
Patient interview
Item Description
Information provided by patient on visit of 1/19/99
Text
Patient came complaining of breathing difficulties. No external injuries were observed. Has no allergies. Had the patient take a chest x-ray. Initial observation indicated no abnormalities. May need to consult Dr. A.I
Save
Cancel
Print
Data item information
text

FIGURE 19


VidiMedix 2000
VIDIMEDIX Series 2000 Medical
NO ALERT
Patients
Patient Registration
Appointments
Schedule Patient
Video Conference
Send Alert
Home
Configuration
Exit
No Photo Available
Jane D. Appleman
Gender: Female
DOB:1:17:61
Chart
Done
Import Image
Data Item Information
Import Image
Data Item Information
Item Name
Chest X-ray 1
Item Description
Patient shows no abnormalities
Import Image
Import Image
Browse
Save
Cancel
Print
Data item information
Image Import

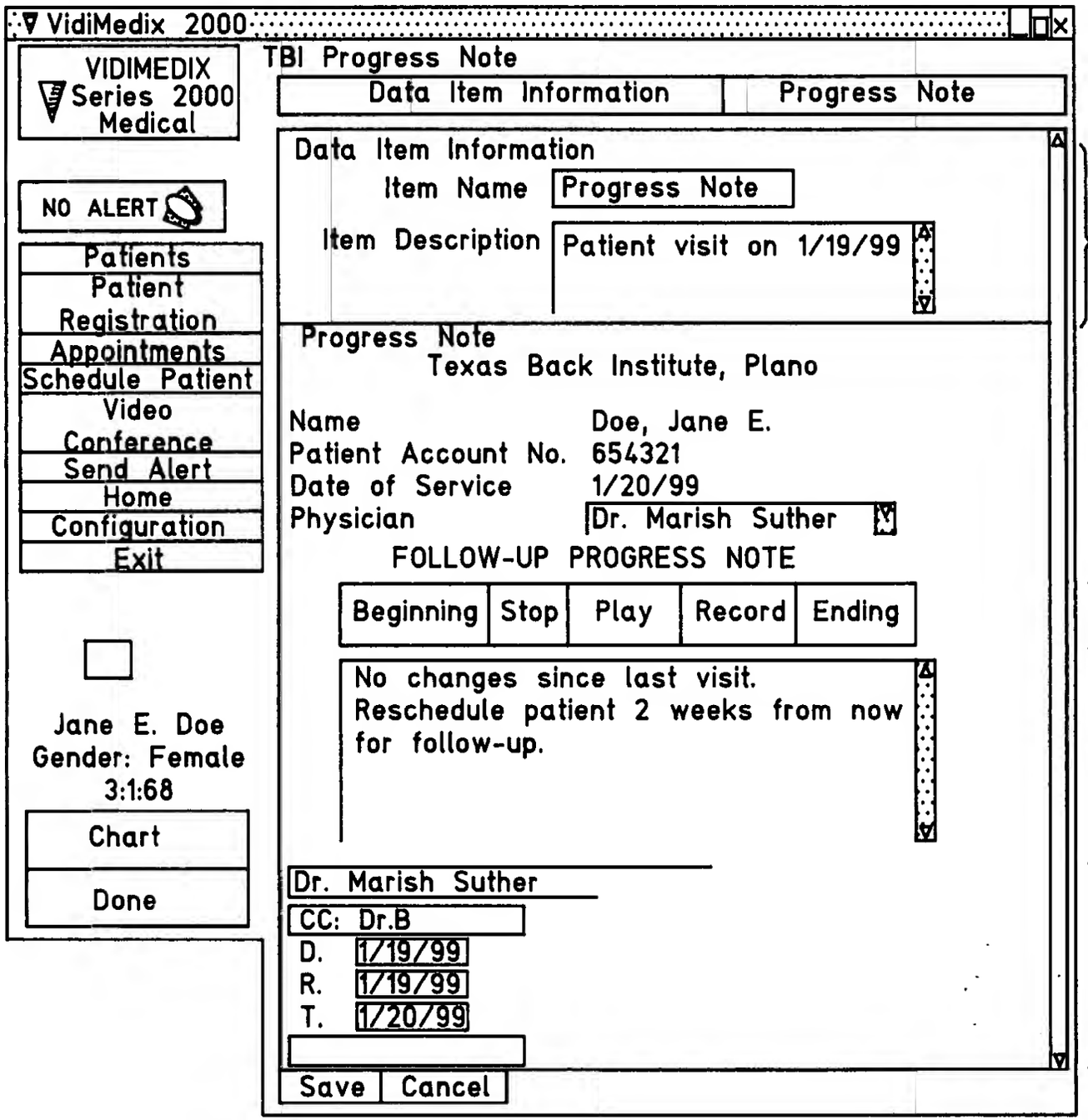

VidiMedix 2000
VIDIMEDIX Series 2000 Medical
NO ALERT
Patients
Patient Registration
Appointments
Schedule Patient
Video Conference
Send Alert
Home
Configuration
Exit
Jane E. Doe
Gender: Female
3:1:68
Chart
Done
TBI Progress Note
Data Item Information
Progress Note
Data Item Information
Item Name
Progress Note
Item Description
Patient visit on 1/19/99
Progress Note
Texas Back Institute, Plano
Name
Doe, Jane E.
Patient Account No.
654321
Date of Service
1/20/99
Physician
Dr. Marish Suther
FOLLOW-UP PROGRESS NOTE
Beginning
Stop
Play
Record
Ending
No changes since last visit.
Reschedule patient 2 weeks from now
for follow-up.
Dr. Marish Suther
CC: Dr.B
D. 1/19/99
R. 1/19/99
T. 1/20/99
Save
Cancel
Data item information
Progress Note Top (User Defined)
audio
text
Progress Note Bottom (User Defined)

FIGURE 20

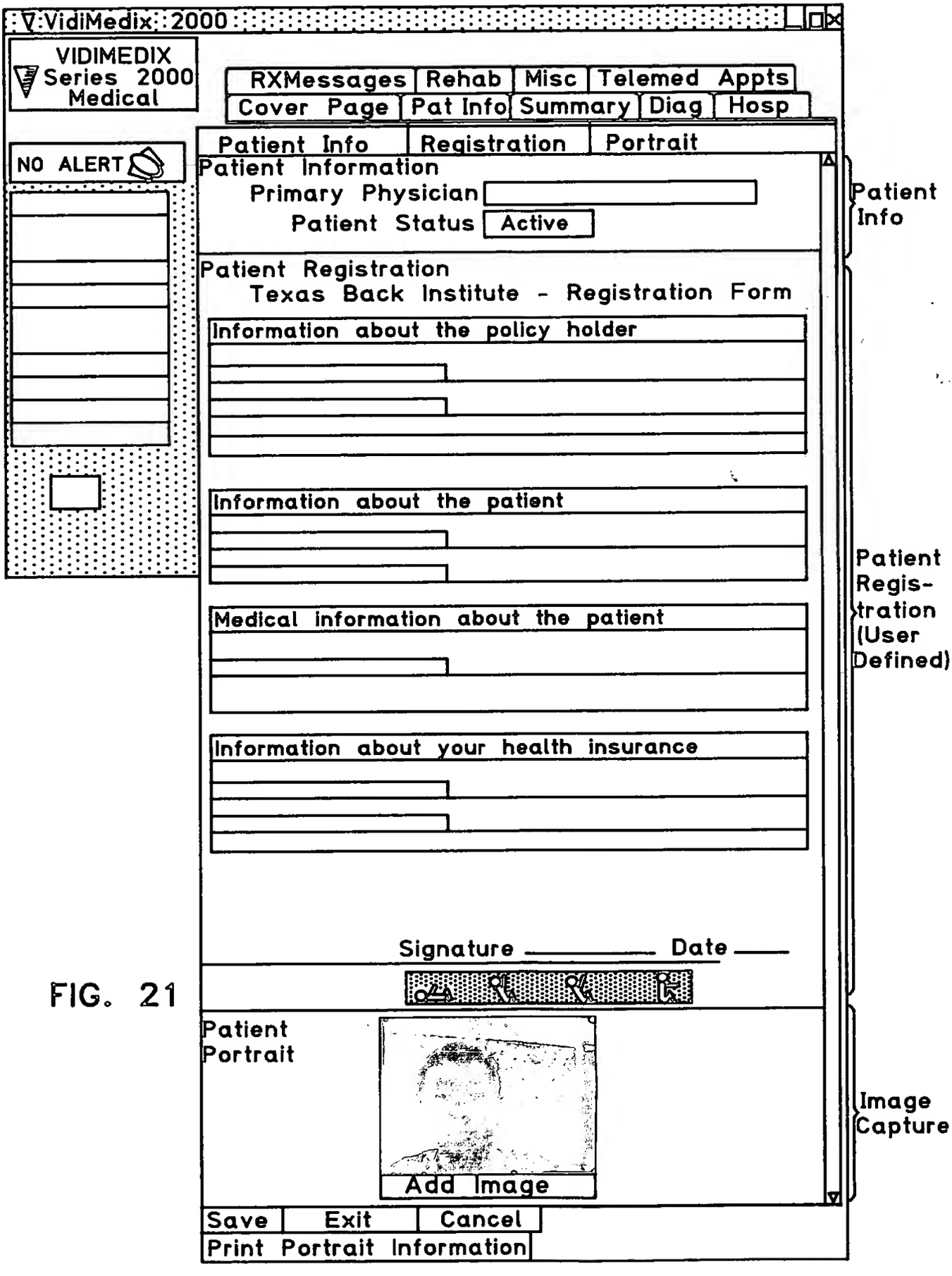

VidiMedix 2000
VIDIMEDIX Series 2000 Medical
NO ALERT
RXMessages
Rehab
Misc
Telemed Appts
Cover Page
Pat Info
Summary
Diag
Hosp
Patient Info
Registration
Portrait
Patient Information
Primary Physician
Patient Status
Active
Patient Registration
Texas Back Institute - Registration Form
Information about the policy holder
Information about the patient
Medical information about the patient
Information about your health insurance
Signature
Date
Patient Portrait
Add Image
Save
Exit
Cancel
Print Portrait Information
Patient Info
Patient Regis-tration (User Defined)
Image Capture

FIG. 21

FIGURE 22

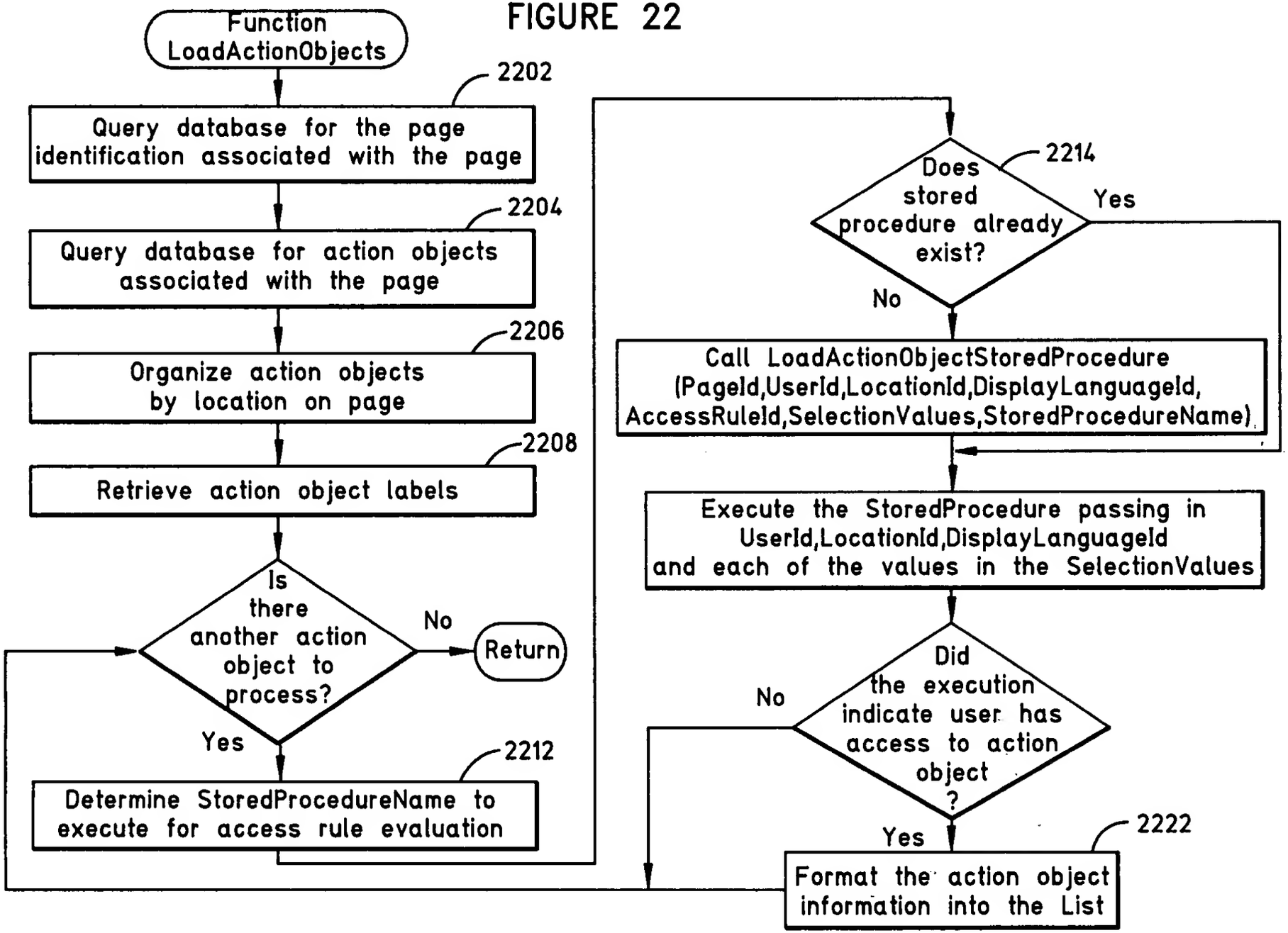

Function LoadActionObjects
2202
Query database for the page identification associated with the page
2204
Query database for action objects associated with the page
2206
Organize action objects by location on page
2208
Retrieve action object labels
Is there another action object to process?
No
Return
Yes
2212
Determine StoredProcedureName to execute for access rule evaluation
2214
Does stored procedure already exist?
Yes
No
Call LoadActionObjectStoredProcedure (PageId,UserId,LocationId,DisplayLanguageId, AccessRuleId,SelectionValues,StoredProcedureName)
Execute the StoredProcedure passing in UserId,LocationId,DisplayLanguageId and each of the values in the SelectionValues
Did the execution indicate user has access to action object ?
No
Yes
2222
Format the action object information into the List

FIGURE 23

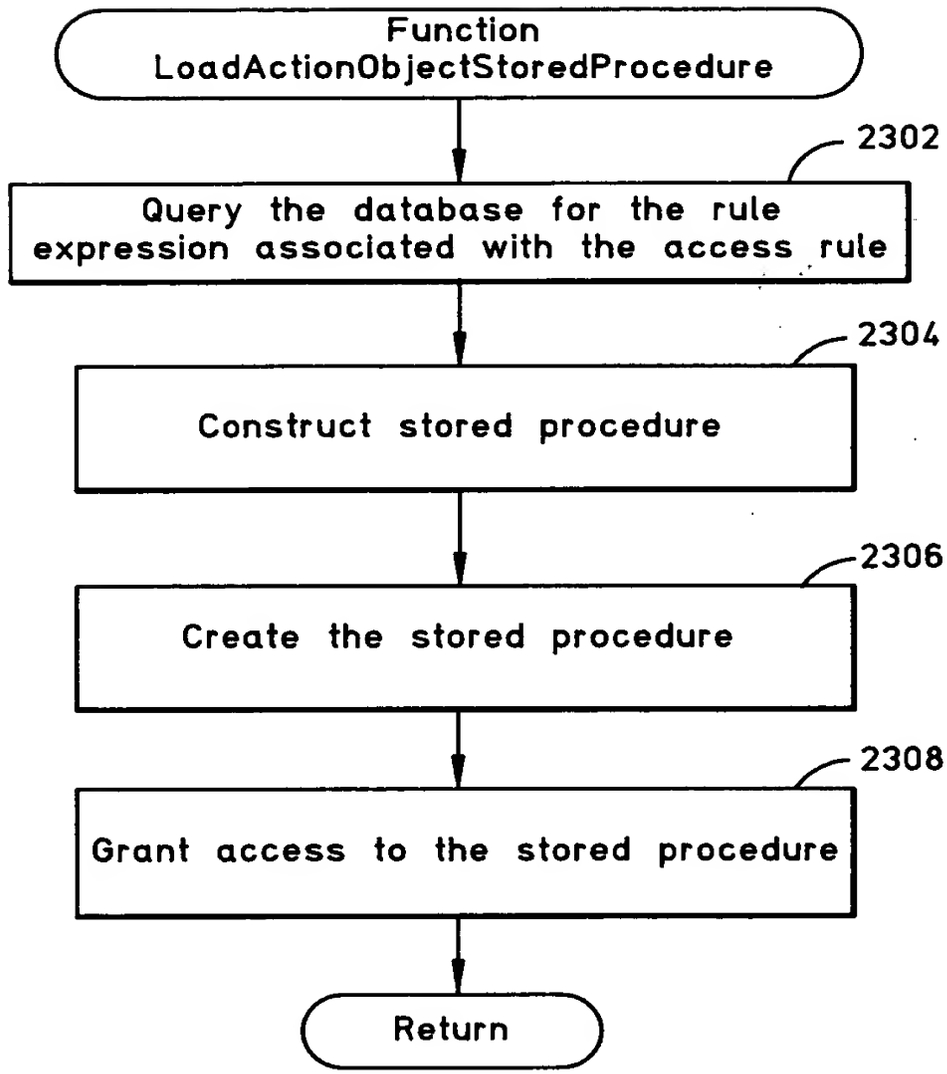

Function
LoadActionObjectStoredProcedure
2302
Query the database for the rule expression associated with the access rule
2304
Construct stored procedure
2306
Create the stored procedure
2308
Grant access to the stored procedure
Return

FIGURE 24

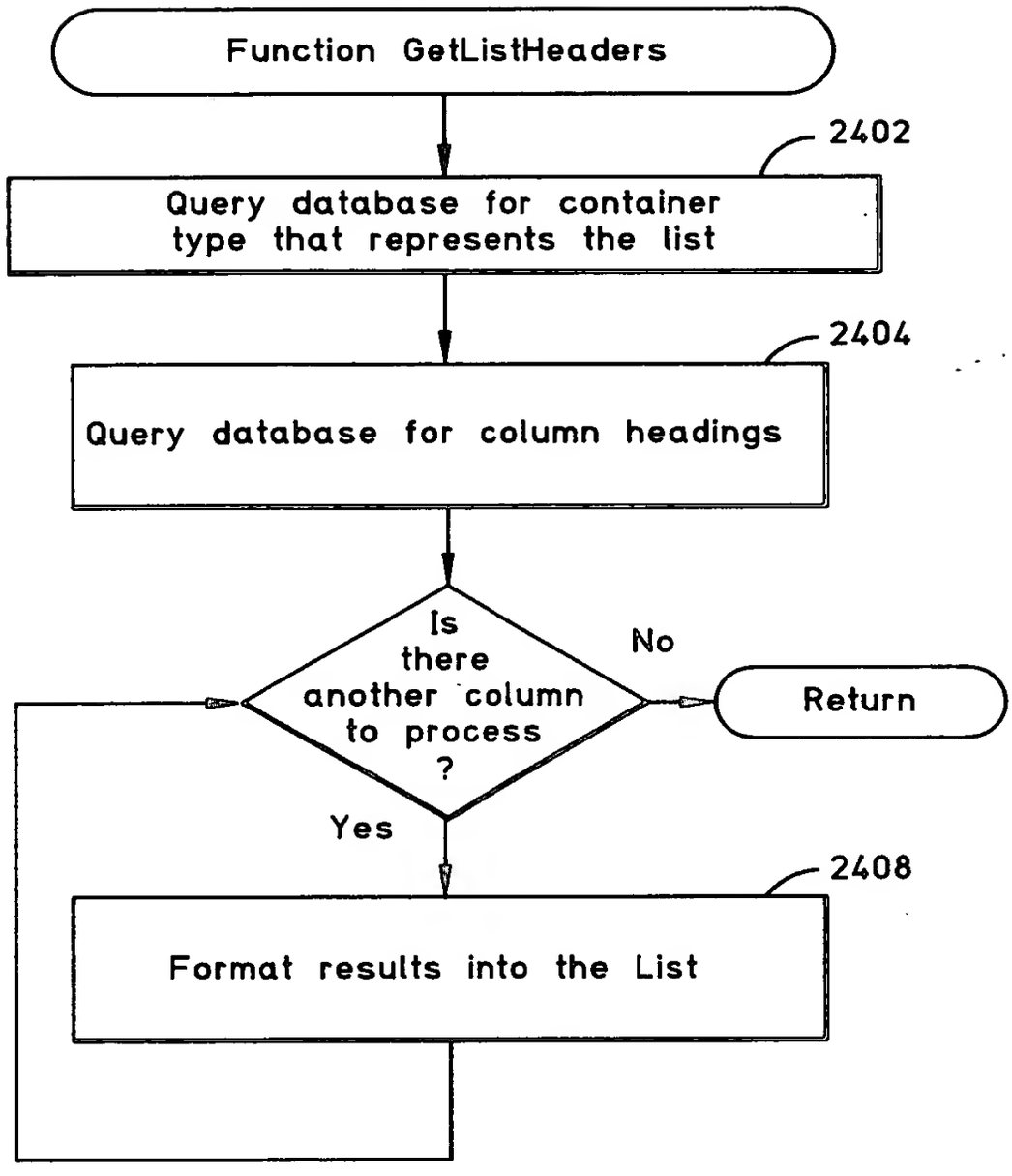

Function GetListHeaders
2402
Query database for container type that represents the list
2404
Query database for column headings
Is there another column to process ?
No
Return
Yes
2408
Format results into the List

FIGURE 25

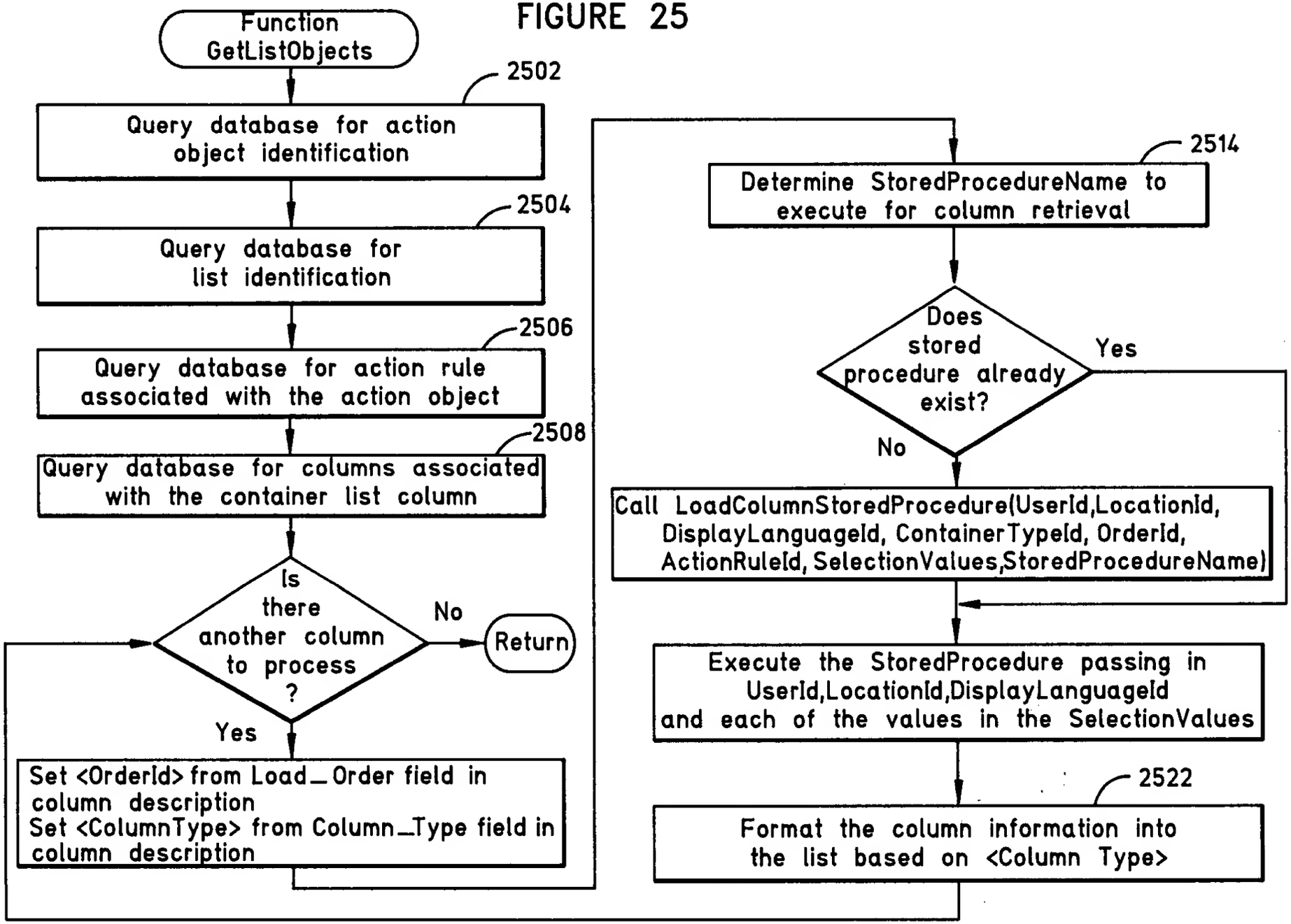

Function GetListObjects
2502
Query database for action object identification
2504
Query database for list identification
2506
Query database for action rule associated with the action object
2508
Query database for columns associated with the container list column
Is there another column to process ?
No
Return
Yes
Set <OrderId> from Load_Order field in column description
Set <ColumnType> from Column_Type field in column description
2514
Determine StoredProcedureName to execute for column retrieval
Does stored procedure already exist?
Yes
No
Call LoadColumnStoredProcedure(UserId,LocationId, DisplayLanguageId, ContainerTypeId, OrderId, ActionRuleId, SelectionValues,StoredProcedureName)
Execute the StoredProcedure passing in UserId,LocationId,DisplayLanguageId and each of the values in the SelectionValues
2522
Format the column information into the list based on <Column Type>

FIGURE 26

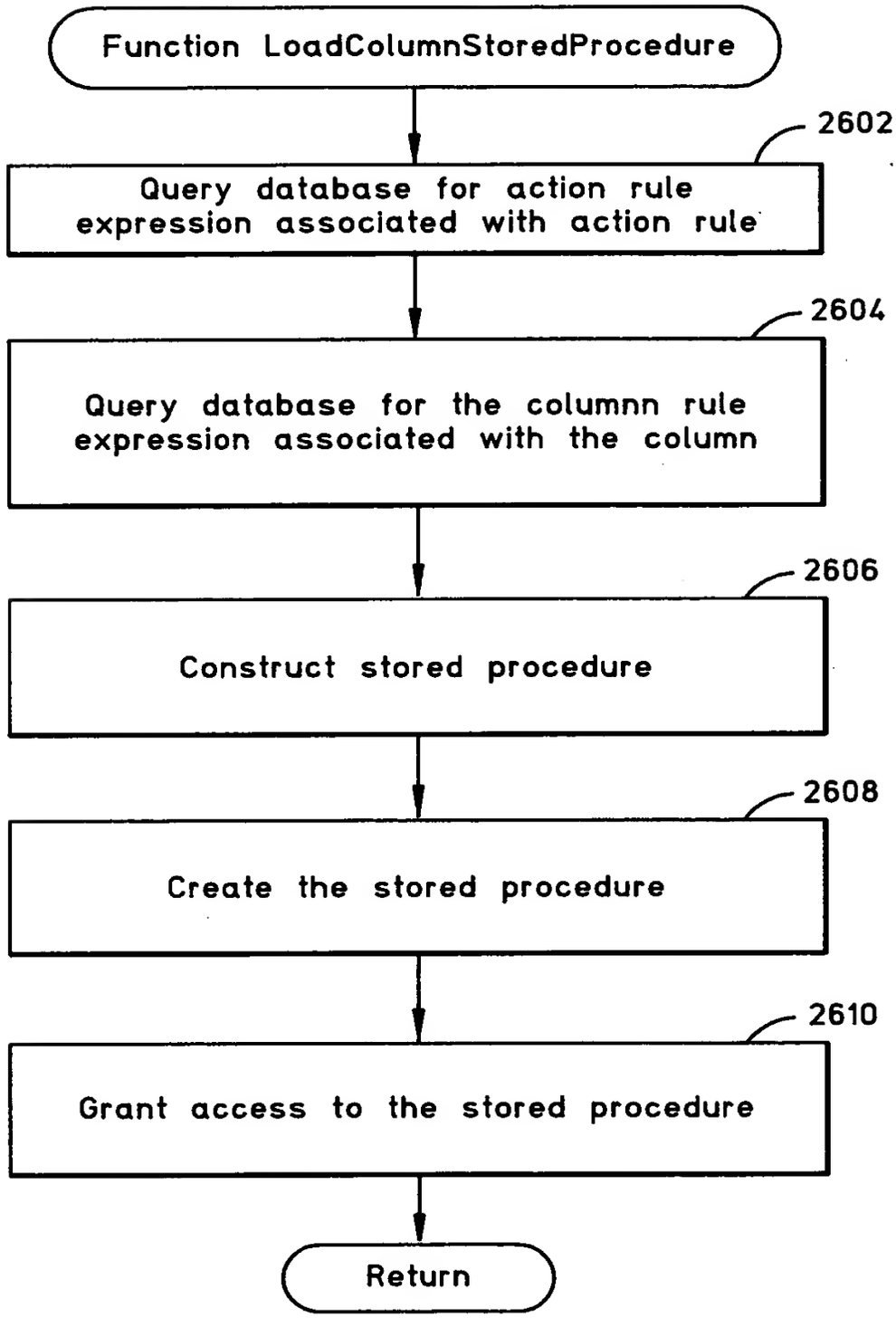

Function LoadColumnStoredProcedure
2602
Query database for action rule expression associated with action rule
2604
Query database for the columnn rule expression associated with the column
2606
Construct stored procedure
2608
Create the stored procedure
2610
Grant access to the stored procedure
Return

FIGURE 27

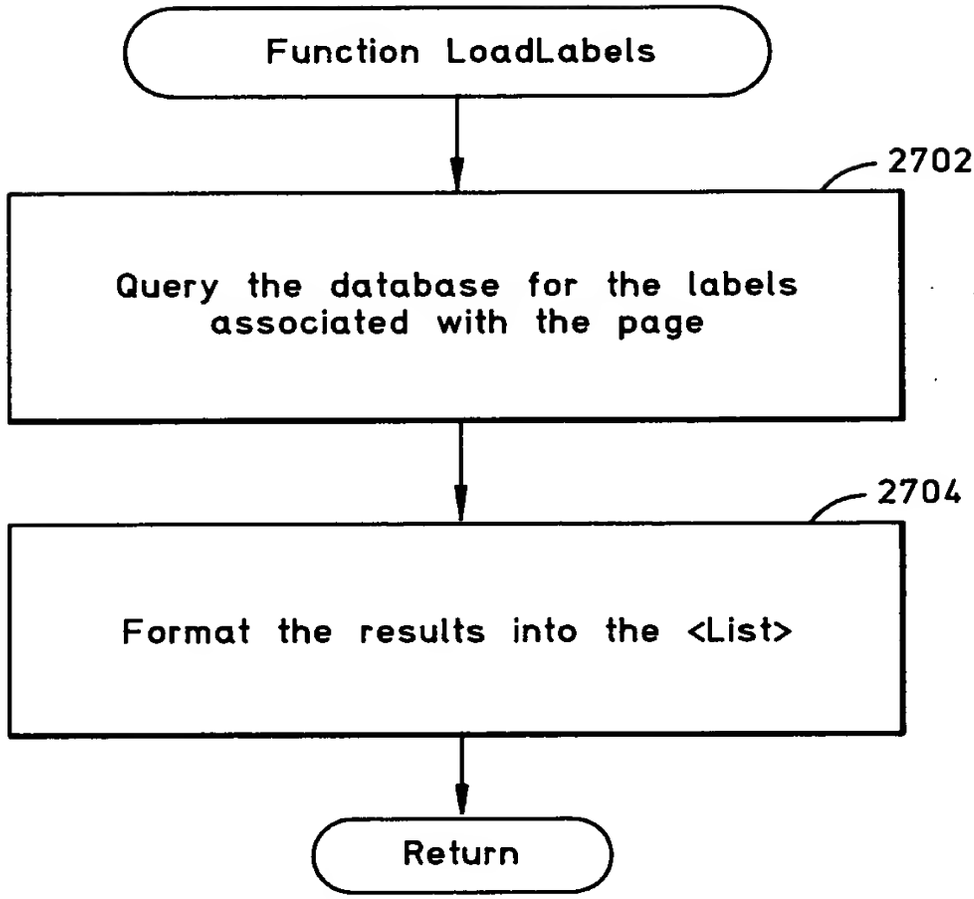

Function LoadLabels
2702
Query the database for the labels associated with the page
2704
Format the results into the <List>
Return

FIGURE 28A

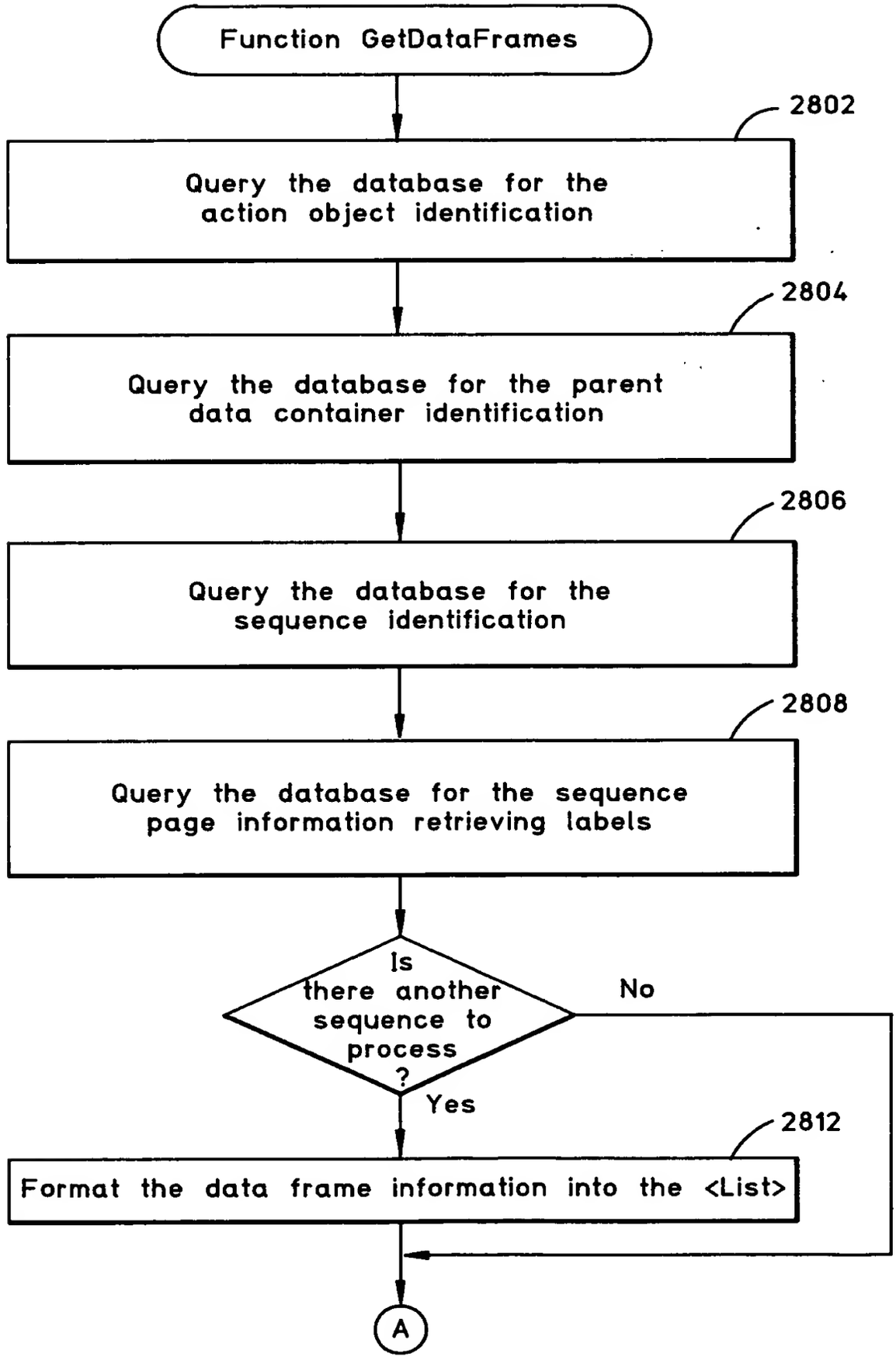

Function GetDataFrames
2802
Query the database for the action object identification
2804
Query the database for the parent data container identification
2806
Query the database for the sequence identification
2808
Query the database for the sequence page information retrieving labels
Is there another sequence to process ?
No
Yes
2812
Format the data frame information into the <List>
A

FIGURE 28B

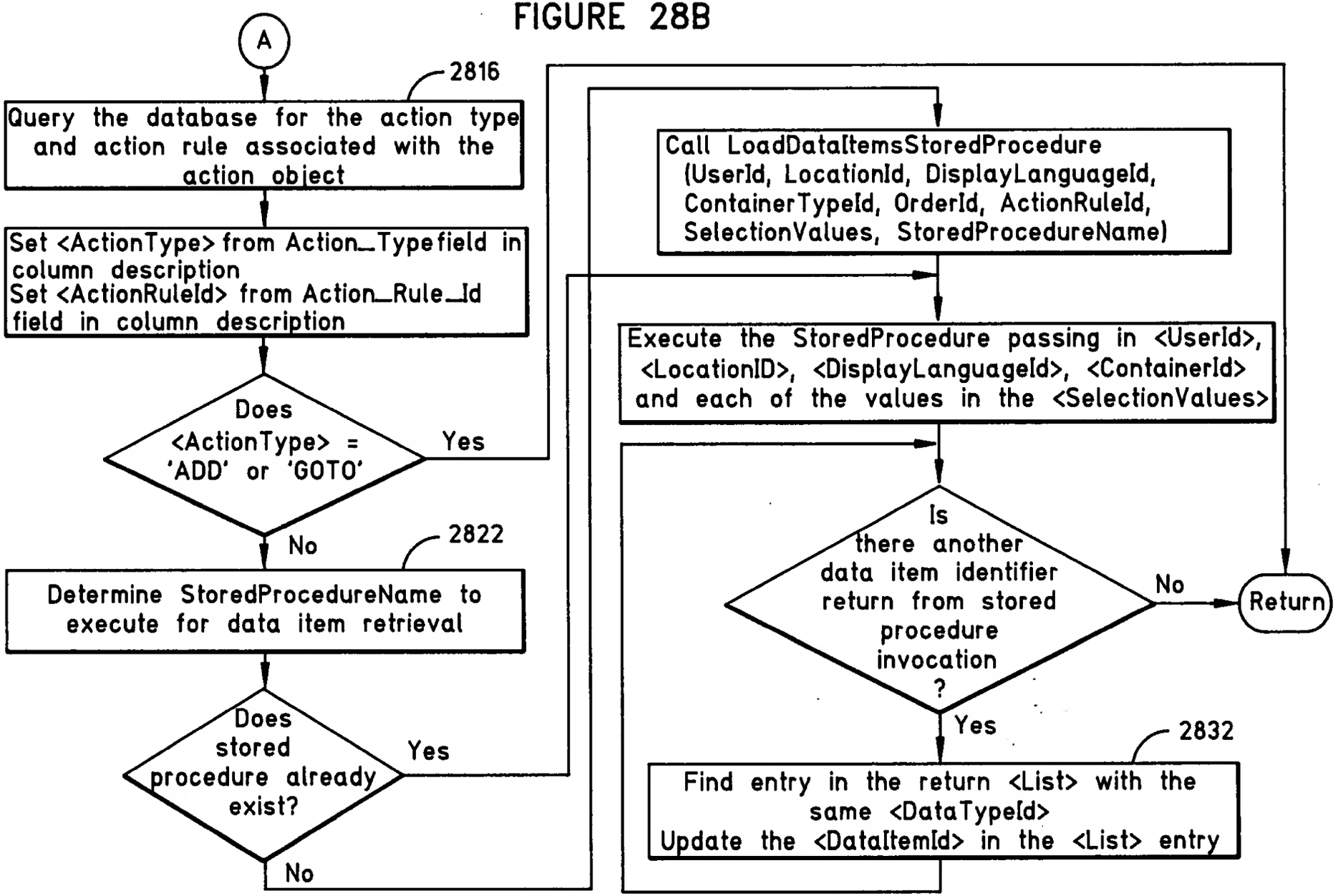

A
2816
Query the database for the action type and action rule associated with the action object
Set <ActionType> from Action_Type field in column description
Set <ActionRuleId> from Action_Rule_Id field in column description
Does <ActionType> = 'ADD' or 'GOTO'
Yes
No
2822
Determine StoredProcedureName to execute for data item retrieval
Does stored procedure already exist?
Yes
No
Call LoadDataItemsStoredProcedure (UserId, LocationId, DisplayLanguageId, ContainerTypeId, OrderId, ActionRuleId, SelectionValues, StoredProcedureName)
Execute the StoredProcedure passing in <UserId>, <LocationID>, <DisplayLanguageId>, <ContainerId> and each of the values in the <SelectionValues>
Is there another data item identifier return from stored procedure invocation ?
No
Return
Yes
2832
Find entry in the return <List> with the same <DataTypeId>
Update the <DataItemId> in the <List> entry

FIGURE 29

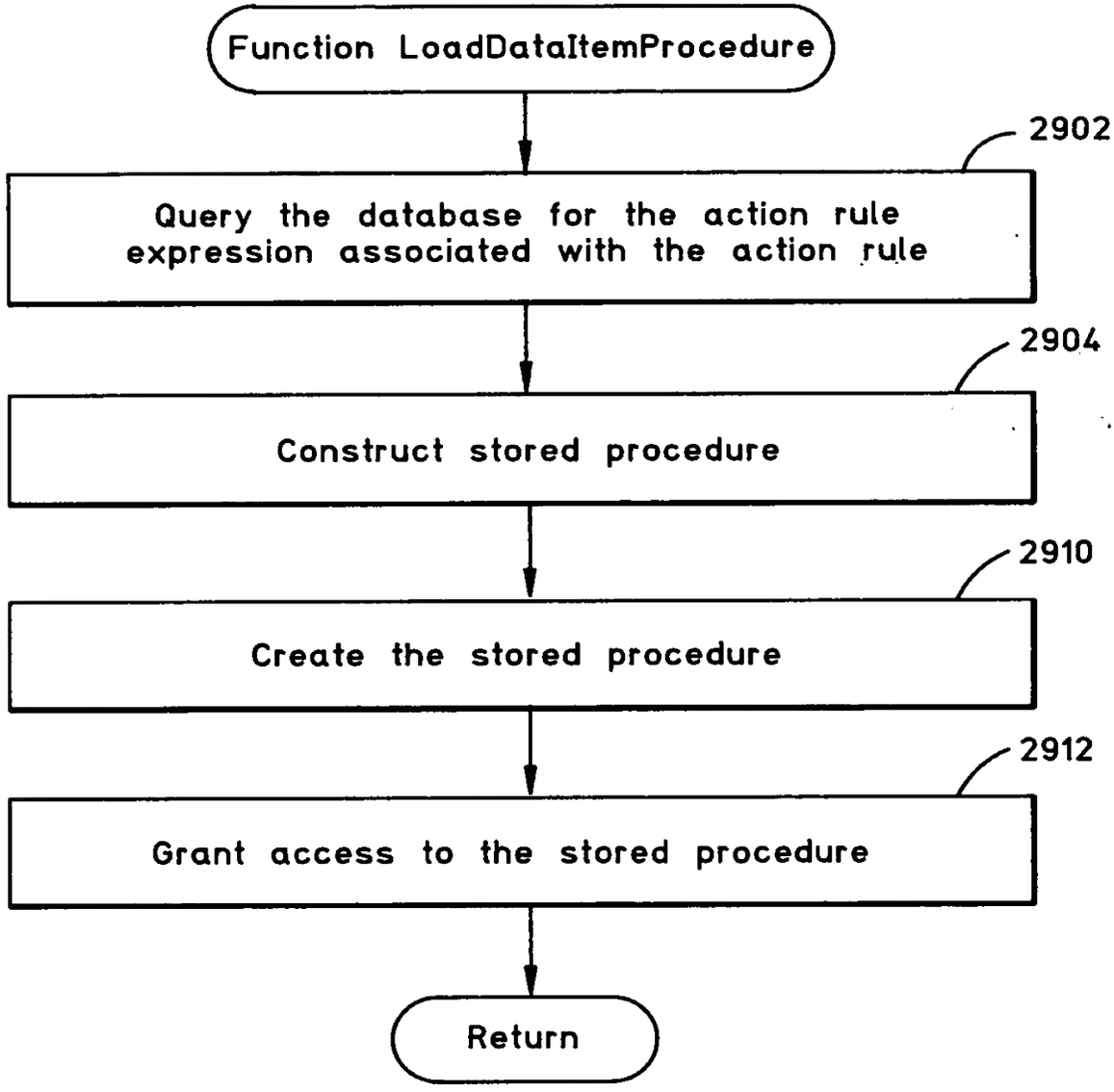

Function LoadDataItemProcedure
2902
Query the database for the action rule expression associated with the action rule
2904
Construct stored procedure
2910
Create the stored procedure
2912
Grant access to the stored procedure
Return

FIGURE 30

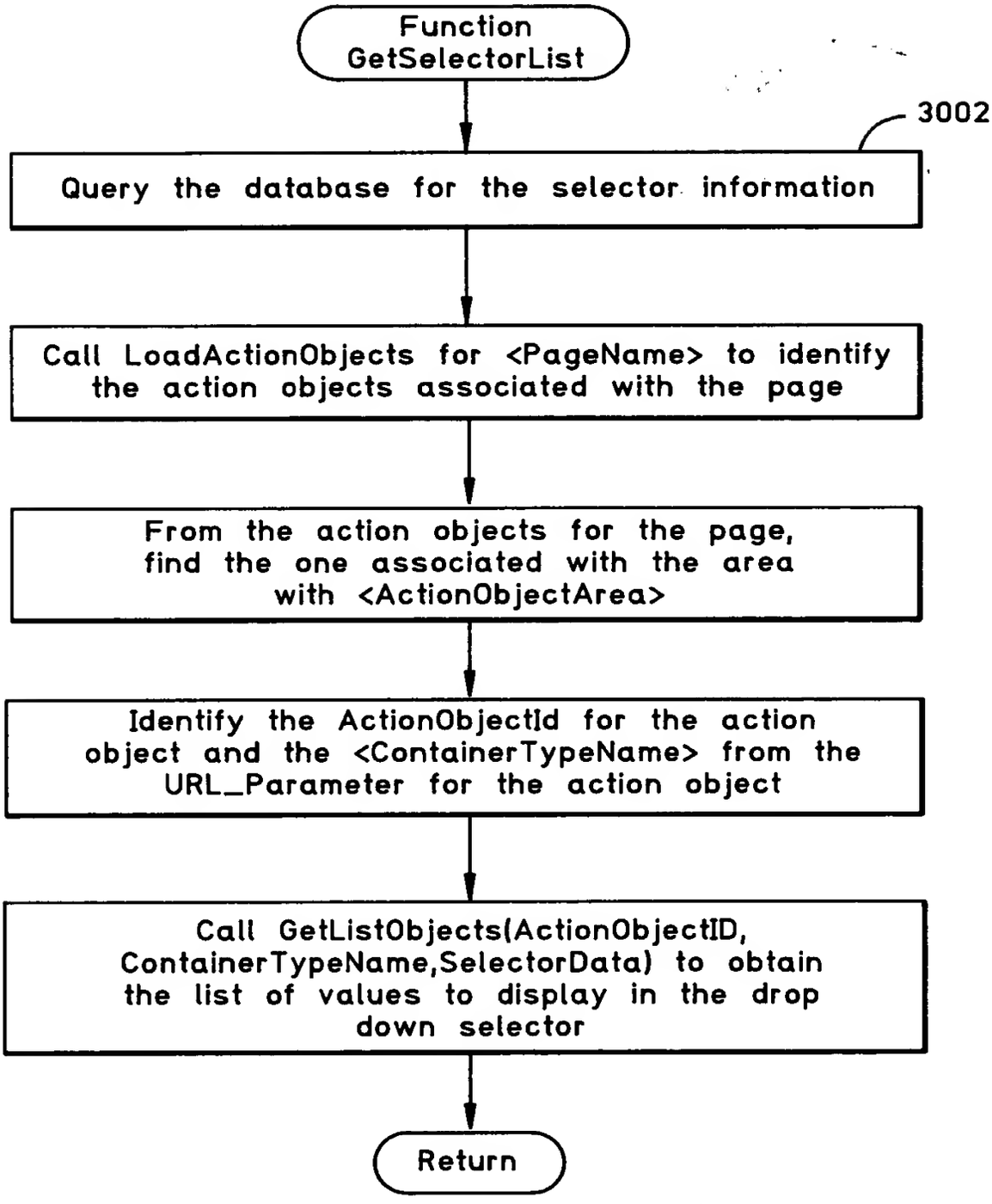

Function GetSelectorList
3002
Query the database for the selector information
Call LoadActionObjects for <PageName> to identify the action objects associated with the page
From the action objects for the page, find the one associated with the area with <ActionObjectArea>
Identify the ActionObjectId for the action object and the <ContainerTypeName> from the URL_Parameter for the action object
Call GetListObjects(ActionObjectID, ContainerTypeName,SelectorData) to obtain the list of values to display in the drop down selector
Return

FIGURE 31

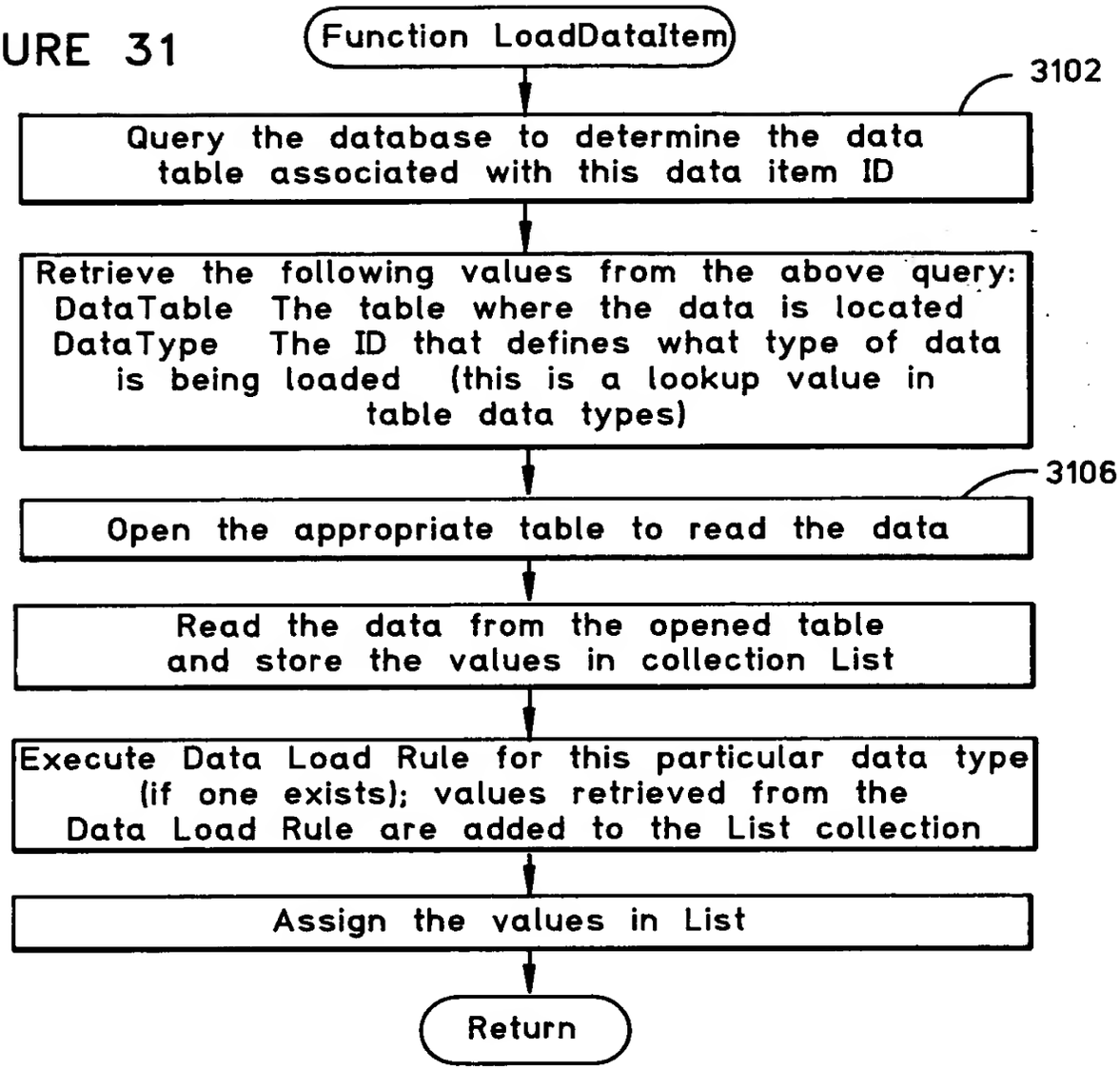


FIGURE 32

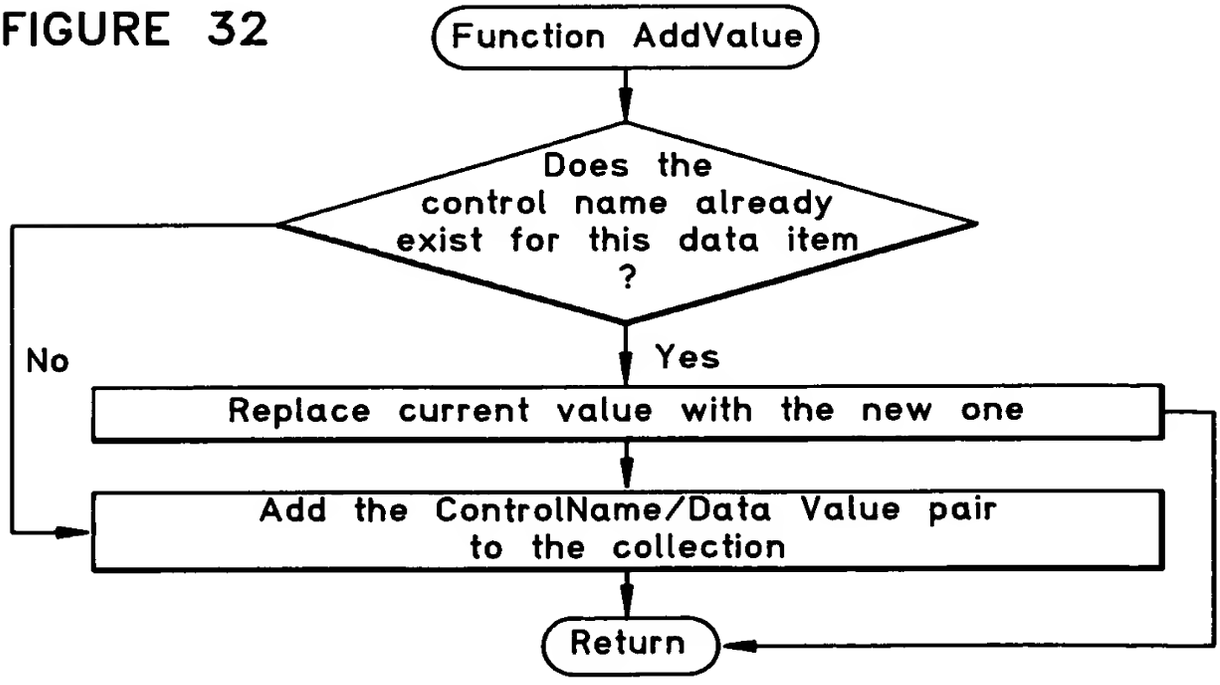


FIGURE 33

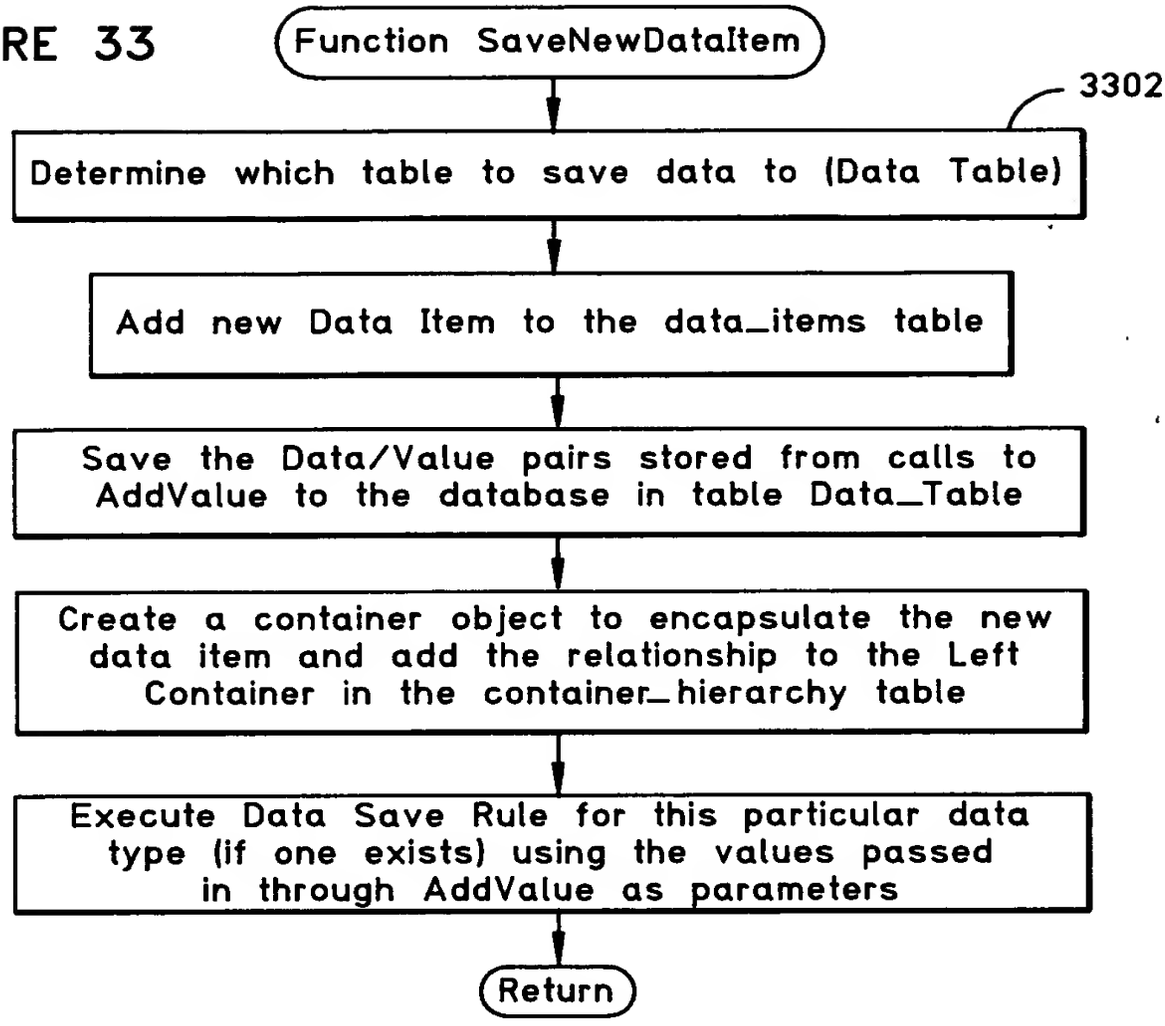


FIGURE 34

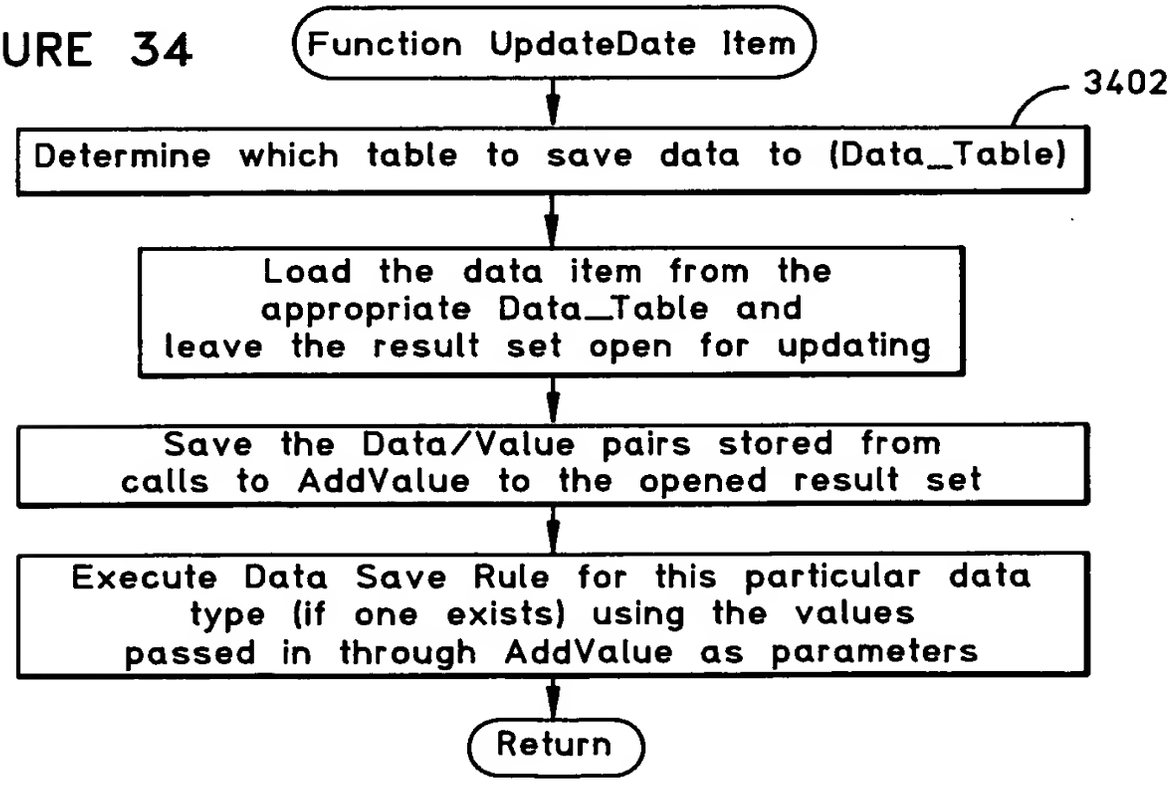


FIGURE 35

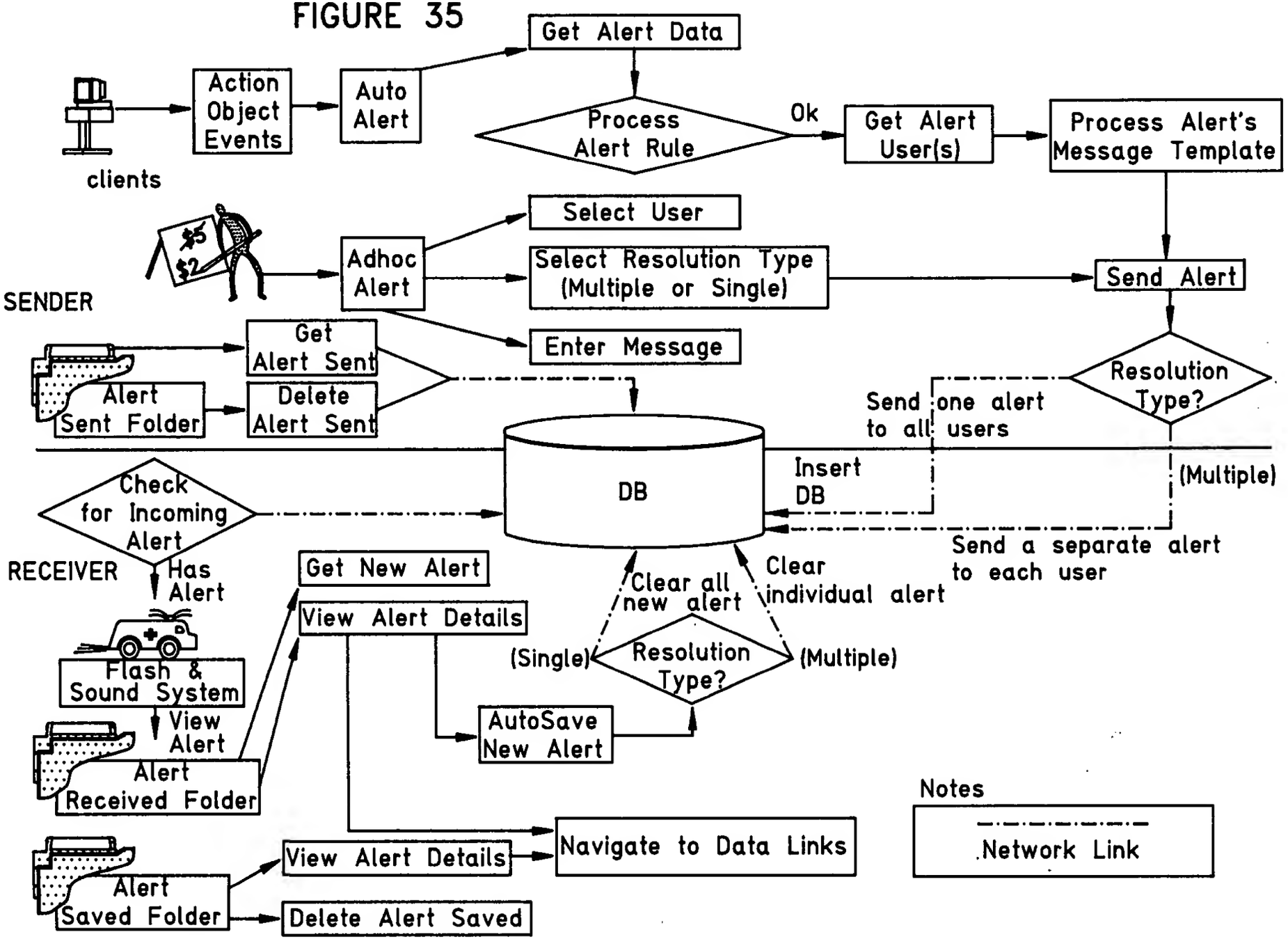

Get Alert Data
Action Object Events
Auto Alert
clients
Process Alert Rule
Ok
Get Alert User(s)
Process Alert's Message Template
Select User
Adhoc Alert
Select Resolution Type (Multiple or Single)
Send Alert
SENDER
Get Alert Sent
Enter Message
Alert Sent Folder
Delete Alert Sent
Resolution Type?
Send one alert to all users
DB
Insert DB
(Multiple)
Check for Incoming Alert
Send a separate alert to each user
RECEIVER
Has Alert
Get New Alert
Clear all new alert
Clear individual alert
View Alert Details
(Single)
Resolution Type?
(Multiple)
Flash & Sound System
AutoSave New Alert
View Alert
Alert Received Folder
Notes
Navigate to Data Links
View Alert Details
Network Link
Alert Saved Folder
Delete Alert Saved

FIGURE 36

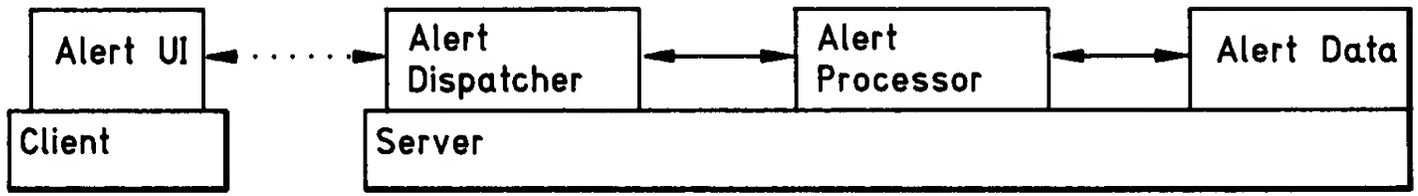
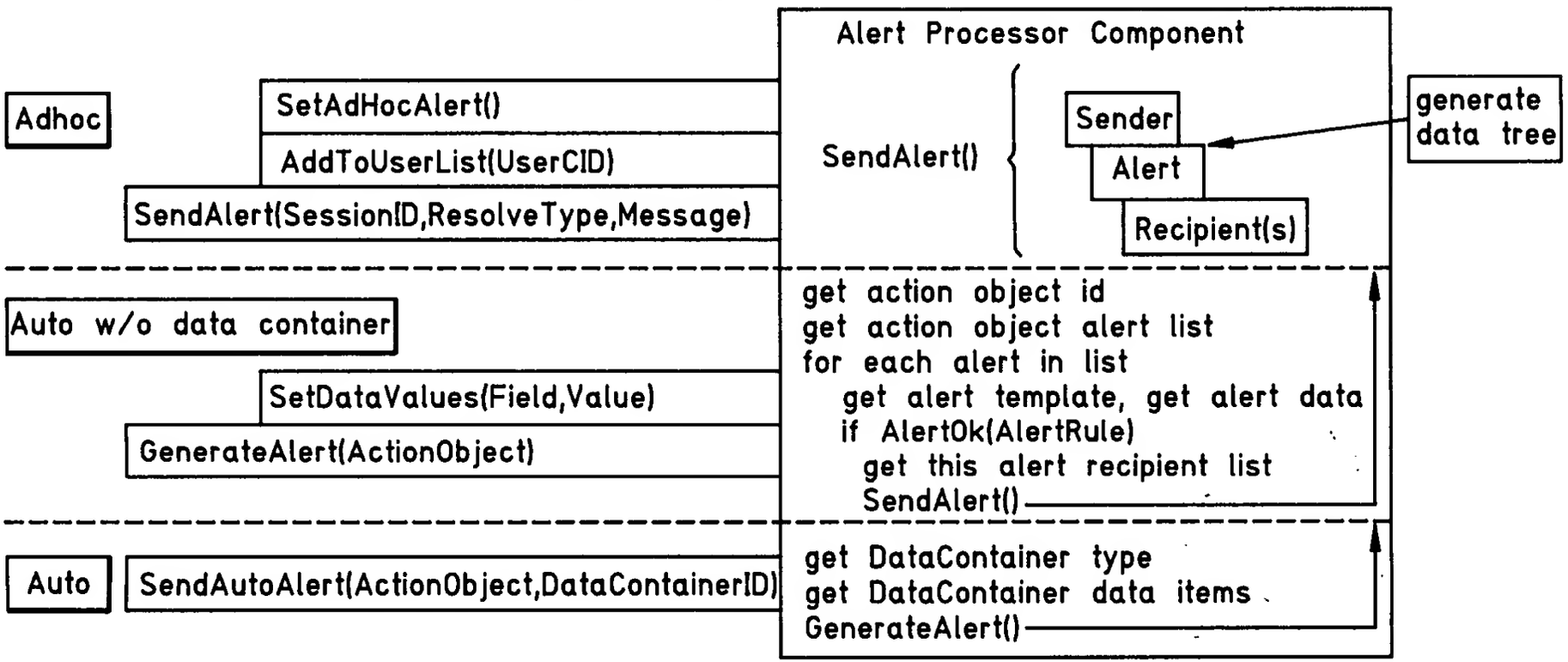


FIGURE 38



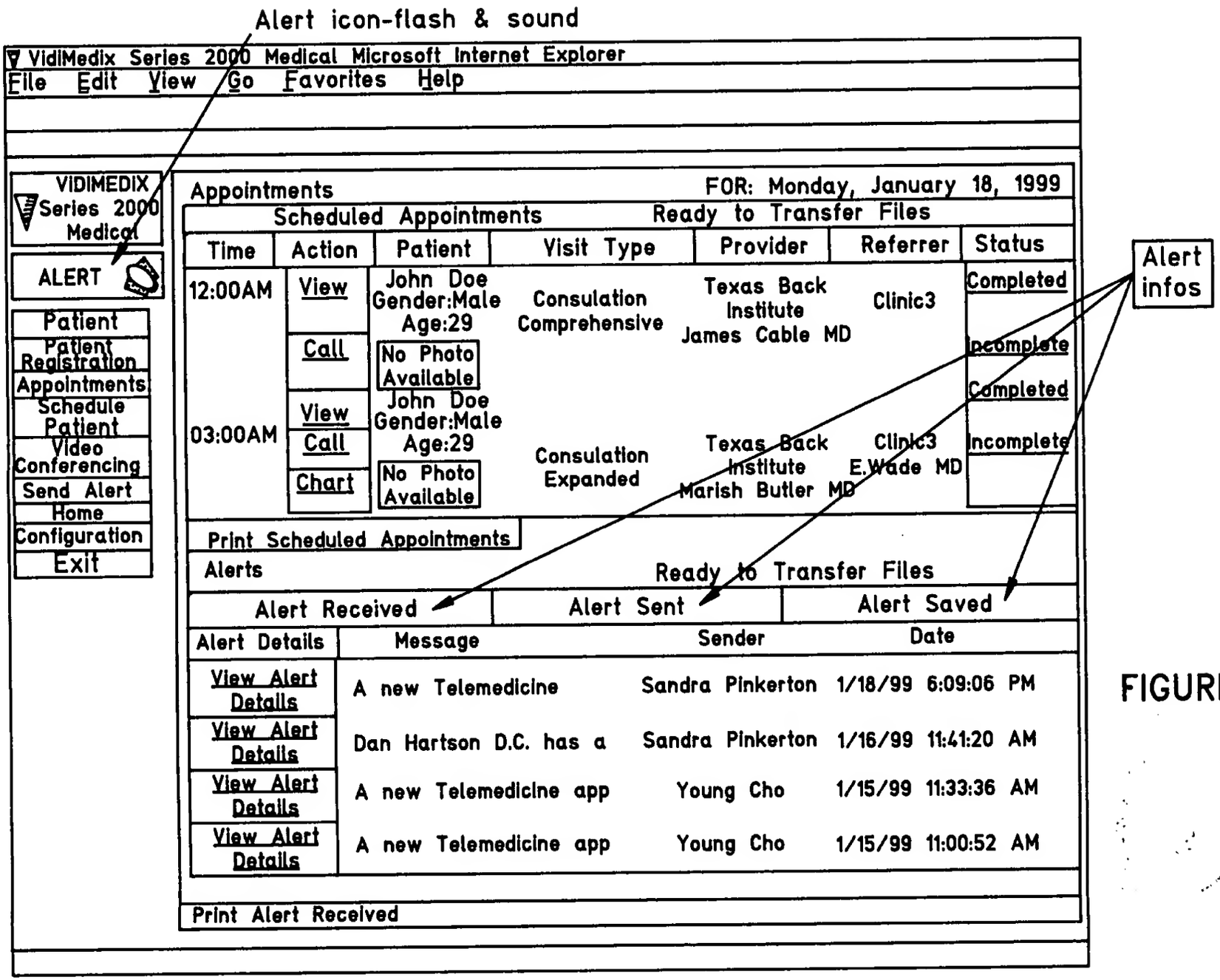

Alert icon-flash & sound
VidiMedix Series 2000 Medical Microsoft Internet Explorer
File Edit View Go Favorites Help
VIDIMEDIX Series 2000 Medical
ALERT
Patient
Patient Registration
Appointments
Schedule Patient
Video Conferencing
Send Alert
Home
Configuration
Exit
Appointments
FOR: Monday, January 18, 1999
Scheduled Appointments
Ready to Transfer Files
Time
Action
Patient
Visit Type
Provider
Referrer
Status
12:00AM
View
Call
John Doe
Gender:Male
Age:29
No Photo Available
Consulation Comprehensive
Texas Back Institute
James Cable MD
Clinic3
Completed
Incomplete
03:00AM
View
Call
Chart
John Doe
Gender:Male
Age:29
No Photo Available
Consulation Expanded
Texas Back Institute
Marish Butler MD
Clinic3
E.Wade MD
Completed
Incomplete
Print Scheduled Appointments
Alerts
Ready to Transfer Files
Alert Received
Alert Sent
Alert Saved
Alert Details
Message
Sender
Date
View Alert Details
A new Telemedicine
Sandra Pinkerton
1/18/99 6:09:06 PM
View Alert Details
Dan Hartson D.C. has a
Sandra Pinkerton
1/16/99 11:41:20 AM
View Alert Details
A new Telemedicine app
Young Cho
1/15/99 11:33:36 AM
View Alert Details
A new Telemedicine app
Young Cho
1/15/99 11:00:52 AM
Print Alert Received
Alert infos

FIGURE 37